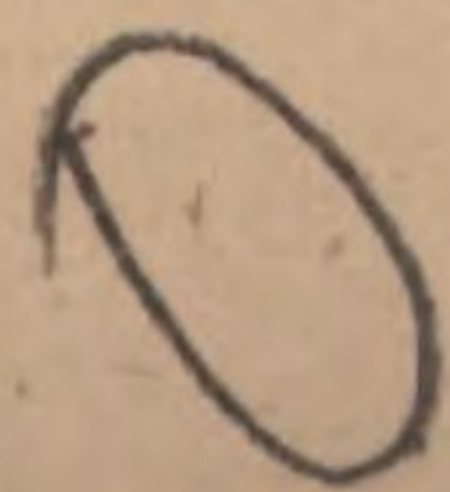


4^o Emc. 7-16,2



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Rome.

ready adulation, set up the statues of the favourite beside those of Tiberius, and seemed eager to pay him similar honours. It is not well known whether he was the adviser of all the cruelties that ensued soon after; but certain it is, that, from the beginning of his ministry, Tiberius seemed to become more fatally suspicious.

273
His infam-
ous con-
duct.

It was from such humble beginnings that this minister even ventured to aspire at the throne, and was resolved to make the emperor's foolish confidence one of the first steps to his ruin. However, he considered that cutting off Tiberius alone would rather retard than promote his designs while his son Drusus and the children of Germanicus were yet remaining. He therefore began by corrupting Livia, the wife of Drusus; whom, after having debauched her, he prevailed upon to poison her husband. This was effected by means of a slow poison (as we are told), which gave his death the appearance of a casual distemper. Tiberius, in the mean time, either naturally phlegmatic, or at least not much regarding his son, bore his death with great tranquillity. He was even heard to jest upon the occasion; for when the ambassadors from Troy came somewhat late with their compliments of condolence, he answered their pretended distresses, by condoling with them also upon the loss of Hector.

274
Tiberius re-
tires from
Rome.

Sejanus having succeeded in this, was resolved to make his next attempt upon the children of Germanicus, who were undoubted successors to the empire. However, he was frustrated in his designs, both with regard to the fidelity of their governors, and the chastity of Agrippina their mother. Whereupon he resolved upon changing his aims, and removing Tiberius out of the city; by which means he expected more frequent opportunities of putting his designs into execution. He therefore used all his address to persuade Tiberius to retire to some agreeable retreat, remote from Rome. By this he expected many advantages, since there could be no access to the emperor but by him. Thus all letters being conveyed to the prince by soldiers at his own devotion, they would pass through his hands; by which means he must in time become the sole governor of the empire, and at last be in a capacity of removing all obstacles to his ambition. He now therefore began to insinuate to Tiberius the great and numerous inconveniences of the city, the fatigues of attending the senate, and the seditious temper of the inferior citizens of Rome. Tiberius, either prevailed upon by his persuasions, or pursuing the natural turn of his temper, which led to indolence and debauchery, in the twelfth year of his reign left Rome, and went into Campania, under pretence of dedicating temples to Jupiter and Augustus. After this, though he removed to several places, he never returned to Rome; but spent the greatest part of his time in the island of Caprea, a place which was rendered as infamous by his pleasures as detestable by his cruelties, which were shocking to human nature. Buried in this retreat, he gave himself up to his pleasures, quite regardless of the miseries of his subjects. Thus an insurrection of the Jews, upon placing his statue in Jerusalem, under the government of Pontius Pilate, gave him no sort of uneasiness. The falling of an amphitheatre at Fidenæ, in which 50,000 persons were either killed or wounded, no way affected his repose. He was only employed in studying how

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to vary his odious pleasures, and forcing his feeble frame, shattered by age and former debaucheries, into the enjoyment of them. Nothing can present a more horrid picture than the retreat of this impure old man, attended by all the ministers of his perverted appetites. He was at this time 67 years old; his person was most displeasing; and some say the disagreeableness of it, in a great measure, drove him into retirement. He was quite bald before; his face was all broke out into ulcers, and covered over with plasters; his body was bowed forward, while its extreme height and leanness increased its deformity. With such a person, and a mind still more hideous, being gloomy, suspicious, and cruel, he sat down with a view rather of forcing his appetites than satisfying them. He spent whole nights in debaucheries at the table; and he appointed Pomponius Flaccus and Lucius Piso to the first posts of the empire, for no other merit than that of having sat up with him two days and two nights without interruption. These he called his friends of all hours. He made one Novellus Torgnatus a prætor for being able to drink off five bottles of wine at a draught. His luxuries of another kind were still more detestable, and seemed to increase with his drunkenness and gluttony. He made the most eminent women of Rome subservient to his lusts; and all his inventions only seemed calculated how to make his vices more extravagant and abominable. The numberless obscene medals dug up in that island at this day bear witness at once to his shame, and the veracity of the historians who have described his debaucheries. In short, in this retreat, which was surrounded with rocks on every side, he quite gave up the business of the empire; or, if he was ever active, it was only to do mischief. But, from the time of his retreat, he became more cruel, and Sejanus always endeavoured to increase his distrusts. Secret spies and informers were placed in all parts of the city, who converted the most harmless actions into subjects of offence. If any person of merit testified any concern for the glory of the empire, it was immediately construed into a design to obtain it. If another spoke with regret of former liberty, he was supposed to aim at re-establishing the commonwealth. Every action became liable to forced interpretations; joy expressed an hope of the prince's death; melancholy, an envying of his prosperity. Sejanus found his aim every day succeeding; the wretched emperor's terrors were an instrument that he wrought upon at his pleasure, and by which he levelled every obstacle to his designs. But the chief objects of his jealousy were the children of Germanicus, whom he resolved to put out of the way. He therefore continued to render them obnoxious to the emperor, to alarm him with false reports of their ambition, and to terrify them with alarms of his intended cruelty. By these means, he so contrived to widen the breach, that he actually produced on both sides those dispositions which he pretended to obviate; till at length, the two princes Nero and Drusus were declared enemies to the state, and afterwards starved to death in prison; while Agrippina their mother was sent into banishment.

Rome.

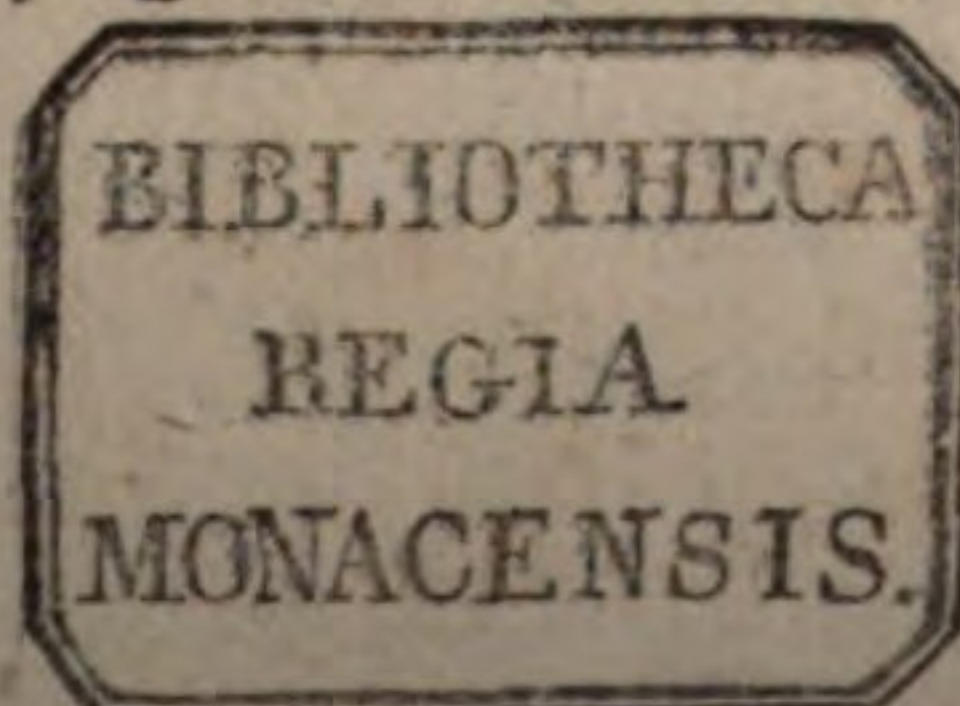
275
His abomi-
nable con-
duct in his
retreat.

276
The chil-
dren of
Germani-
us put to
death.

In this manner Sejanus proceeded, removing all who stood between him and the empire, and every day increasing in confidence with Tiberius, and power with the senate. The number of his statues exceeded even those

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those



Gms 10

Rome. those of the emperor; people swore by his fortune, in the same manner as they would have done had he been actually upon the throne, and he was more dreaded than even the tyrant who actually enjoyed the empire. But the rapidity of his rise seemed only preparatory to the greatness of his downfall. All we know of his first disgrace with the emperor is, that Satrius Secundus was the man who had the boldness to accuse him. Antonia, the mother of Germanicus, seconded the accusation. What were the particulars of his crimes, we cannot learn; but certain it is, that he attempted to usurp the empire, by aiming at the life of Tiberius. He was very near dispatching him, when his practices were discovered, and his own life was substituted for that against which he aimed. Tiberius, sensible of the traitor's power, proceeded with his usual dissimulation in having him apprehended. He granted him new honours at the very time he resolved his death, and took him as his colleague in the consulship. The emperor's letter to the senate began only with slight complaints against his friend, but ended with an order for putting him in prison. He intreated the senators to protect a poor old man, as he was, abandoned by all; and, in the mean time, prepared ships for his flight, and ordered soldiers for his security. The senate, who had long been jealous of the favourite's power, and dreaded his cruelty, immediately took this opportunity of going beyond their orders. Instead of sentencing him to imprisonment, they directed his execution. A strange revolution now appeared in the city; of those numbers that but a moment before were pressing into the presence of Sejanus, with offers of service and adulation, not one was found that would seem to be of his acquaintance: he was deserted by all; and those who had formerly received the greatest benefits from him, seemed now converted into his most inveterate enemies. As he was conducting to execution, the people loaded him with insult and execration. He attempted to hide his face with his hands; but even this was denied him, and his hands were secured. Nor did the rage of his enemies subside with his death; his body was ignominiously dragged about the streets, and his whole family executed with him.

277
Sejanus disgraced and put to death.

278
Monstrous cruelty of Tiberius.

His death only lighted up the emperor's rage for further executions. The prisons were crowded with pretended accomplices in the conspiracy of Sejanus. Tiberius began to grow weary of particular executions; he therefore gave orders that all the accused should be put to death together without further examination. Of 20 senators, whom he chose for his council, he put 16 to death. "Let them hate me (cried he) so long as they obey me." He then averred, that Priam was an happy man, who outlived all his posterity. In this manner there was not a day without some barbarous execution, in which the sufferers were obliged to undergo the most shameful indignities and exquisite torments. When one Camillus had killed himself to avoid the torture: "Ah (cried Tiberius), how that man has been able to escape me!" When a prisoner earnestly intreated that he would not defer his death: "No (cried the tyrant), I am not sufficiently your friend, to shorten your torment." He often satisfied his eyes with the tortures of the wretches that were put to death before him; and in the days of Suetonius

Rome. the rock was to be seen, from which he ordered such as had displeased him to be thrown headlong. As he was one day examining some persons upon the rack, he was told that an old friend of his was come from Rhodes to see him. Tiberius supposing him brought for the purpose of information, immediately ordered him to the torture; and when he was convinced of his mistake, he ordered him to be put to death, to prevent farther discovery.

In this manner did the tyrant continue to torment others, although he was himself still more tortured by his own suspicions; so that in one of his letters to the senate, he confessed that the gods and goddesses had so afflicted and confounded him, that he knew not what or how to write. In the mean time, the frontier provinces were invaded with impunity by the barbarians. Mæsia was seized on by the Dacians and Sarmatians; Gaul was wasted by the Germans, and Armenia conquered by the king of Parthia. Tiberius, however, was so much a slave to his brutal appetites, that he left his provinces wholly to the care of his lieutenants, and they were intent rather on the accumulation of private fortune than the safety of the state. Such a total disorder in the empire produced such a degree of anxiety in him who governed it, that he was heard to wish, that heaven and earth might perish when he died. At length, however, in the 22d year of his reign, he began to feel the approaches of his dissolution, and all his appetites totally to forsake him. He now, therefore, found it was time to think of a successor, and hesitated for a long while, whether he should choose Caligula, whose vices were too apparent to escape his observation. He had been often heard to say, that this youth had all the faults of Sylla, without his virtues; that he was a serpent that would sting the empire, and a Phaeton that would set the world in a flame. However, notwithstanding all his well-grounded apprehensions, he named him for his successor; willing, perhaps, by the enormity of Caligula's conduct to cover the memory of his own.

279
Chooses Caligula for his successor.

But though he thought fit to choose a successor, he concealed his approaching decline with the utmost care, as if he was willing at once to hide it from the world and himself. He long had a contempt for physic, and refused the advice of such as attended him: he even seemed to take a pleasure in being present at the sports of the soldiers, and ventured himself to throw a javelin at a boar that was let loose before him. The effort which he made upon this occasion caused a pain in his side, which hastened the approaches of death: still, however, he seemed willing to avoid his end; and strove, by change of place, to put off the inquietude of his own reflections. He left his favourite island, and went upon the continent, where he at last fixed at the promontory of Misenum. It was here that Charicles, his physician, pretending to kiss his hand, felt the failure of his pulse; and apprised Macro, the emperor's present favourite, that he had not above two days to live. Tiberius, on the contrary, who had perceived the art of Charicles, did all in his power to impress his attendants with an opinion of his health: he continued at table till the evening; he saluted all his guests as they left the room, and read the acts of the senate, in which they had absolved some persons he had written against, with great indignation. He resolved

Rome. resolved to take signal vengeance of their disobedience, and meditated new schemes of cruelty, when he fell in to such faintings, as all believed were fatal. It was in this situation, that, by Macro's advice, Caligula prepared to secure the succession. He received the congratulations of the whole court, caused himself to be acknowledged by the Prætorian soldiers, and went forth from the emperor's apartment amidst the applauses of the multitude; when all of a sudden he was informed that the emperor was recovered, that he had begun to speak, and desired to eat. This unexpected account filled the whole court with terror and alarm: every one who had before been earnest in testifying their joy, now re-assumed their pretended sorrow, and left the new emperor, through a feigned solicitude for the fate of the old. Caligula himself seemed thunder-struck; he preserved a gloomy silence, expecting nothing but death, instead of the empire at which he had aspired. Macro, however, who was hardened in crimes, ordered that the dying emperor should be dispatched, by smothering him with pillows, or, as others will have it, by poison. In this manner Tiberius died, in the 78th year of his age, after reigning 22.

180
Corruptions of the Romans at this time. The Romans were, at this time, arrived at their highest pitch of effeminacy and vice. The wealth of almost every nation of the empire, having, for some time, circulated through the city, brought with it the luxuries peculiar to each country; so that Rome presented a detestable picture of various pollution. In this reign lived Apicius, so well known for having reduced gluttony into a system; some of the most notorious in this way, thought it no shame to give near 100 pounds for a single fish, and exhaust a fortune of 50,000 pounds in one entertainment. Debaucheries of every other kind kept pace with this; while the detestable folly of the times thought it was refining upon pleasure to make it unnatural. There were at Rome men called *pintrix*, whose sole trade it was to study new modes of pleasure; and these were universally favourites of the great. The senators were long fallen from their authority, and were no less estranged from their integrity and honour. Their whole study seemed to be, how to invent new ways of flattering the emperor, and various methods of tormenting his supposed enemies. The people were still more corrupt: they had, for some years, been accustomed to live in idleness, upon the donations of the emperor; and, being satisfied with subsistence, entirely gave up their freedom. Too effeminate and cowardly to go to war, they only railed against their governors; so that they were bad soldiers and seditious citizens. In the 18th year of this monarch's reign, Christ was crucified. 181
Christ crucified. Shortly after his death, Pilate is said to have written to Tiberius an account of his passion, resurrection, and miracles; upon which the emperor made a report of the whole to the senate, desiring that Christ might be accounted a god by the Romans. But the senate being displeased that the proposal had not come first from themselves, refused to allow of his apotheosis; alleging an ancient law, which gave them the superintendence in all matters of religion. They even went so far, as by an edict to command that all Christians should leave the city: but Tiberius, by another edict, threatened death to all such as should accuse them; by which means they continued unmolested during the rest of his reign.

No monarch ever came to the throne with more advantages than Caligula. He was the son of Germanicus, who had been the darling of the army and the people. He was bred among the soldiers, from whom he received the name of *Caligula*, from the short buskin, called *caliga*, that was worn by the common centinels, and which was also usually worn by him. As he approached Rome, the principal men of the state went out in crowds to meet him. He received the congratulations of the people on every side, all equally pleased in being free from the cruelties of Tiberius, and in hoping new advantages from the virtues of his successor.

Caligula seemed to take every precaution to impress them with the opinion of an happy change. Amidst the rejoicings of the multitude, he advanced mourning, with the dead body of Tiberius, which the soldiers brought to be burnt at Rome, according to the custom of that time. Upon his entrance into the city, he was received with new titles of honour by the senate, whose chief employment seemed now to be, the art of increasing their emperor's vanity. He was left co-heir with Gemellus, grandson to Tiberius; but they set aside the nomination, and declared Caligula sole successor to the empire. The joy for this election was not confined to the narrow bounds of Italy; it spread through the whole empire, and victims without number were sacrificed upon the occasion. Some of the people, upon his going into the island of Campania, made vows for his return; and shortly after, when he fell sick, the multitudes crowded whole nights round his palace, and some even devoted themselves to death in case he recovered, setting up bills of their resolutions in the streets. In this affection of the citizens, strangers themselves seemed ambitious of sharing. Artabanus, king of Parthia, sought the emperor's alliance with assiduity. He came to a personal conference with one of his legates; passed the Euphrates, adored the Roman eagles, and kissed the emperor's images; so that the whole world seemed combined to praise him for virtues which they supposed him to possess.

The new emperor at first seemed extremely careful of the public favour; and having performed the funeral solemnities of Tiberius, he hastened to the islands of Pandataria and Pontia, to remove the ashes of his mother and brothers, exposing himself to the dangers of tempestuous weather, to give a lustre to his piety. Having brought them to Rome, he instituted annual solemnities in their honour, and ordered the month of September to be called *Germanicus*, in memory of his father. These ceremonies being over, he conferred the same honours upon his grandmother Antonia, which had before been given to Livia; and ordered all informations to be burnt, that any ways exposed the enemies of his family. He even refused a paper that was offered him, tending to the discovery of a conspiracy against him; alleging, That he was conscious of nothing to deserve any man's hatred, and therefore had no fears from their machinations. He caused the institutions of Augustus, which had been disused in the reign of Tiberius, to be revived; undertook to reform many abuses in the state, and severely punished corrupt governors. Among others, he banished Pontius Pilate into Gaul, where this unjust magistrate afterwards put an end to his life by suicide. He banished the *pintrix*,

Rome.

282
Caligula begins to reign well.

Rome.

or inventors of abominable recreations, from Rome; attempted to restore the ancient manner of electing magistrates by the suffrages of the people; and gave them a free jurisdiction, without any appeal to himself. Although the will of Tiberius was annulled by the senate, and that of Livia suppressed by Tiberius, yet he caused all their legacies to be punctually paid; and in order to make Gemellus amends for missing the crown, he caused him to be elected Princeps Juventutis, or principal of the youth. He restored some kings to their dominions who had been unjustly dispossessed by Tiberius, and gave them the arrears of their revenues. And, that he might appear an encourager of every virtue, he ordered a female slave a large sum of money for enduring the most exquisite torments without discovering the secrets of her master. So many concessions, and such apparent virtue, could not fail of receiving just applause. A shield of gold, bearing his image, was decreed to be carried annually to the Capitol, attended by the senate and the sons of the nobility singing in praise of the emperor's virtues. It was likewise ordained, that the day on which he was appointed to the empire should be called *Pubitia*; implying, that when he came to govern, the city received a new foundation.

283
But be-
comes a
most out-
rageous ty-
rant.

In less than eight months all this shew of moderation and clemency vanished; while furious passions, unexampled avarice, and capricious cruelty, began to take their turn in his mind. As most of the cruelties of Tiberius arose from suspicion, so most of those committed by Caligula took rise from prodigality. Some indeed assert, that a disorder which happened soon after his accession to the empire, entirely discomposed his understanding. However this may be, madness itself could scarce dictate cruelties more extravagant, or inconsistencies more ridiculous, than are imputed to him; some of them appear almost beyond belief, as they seem entirely without any motive to incite such barbarities.

The first object of his cruelty was a person named *Politus*, who had devoted himself to death, in case the emperor, who was then sick, should recover. When Caligula's health was re-established, he was informed of the zeal of *Politus*, and actually compelled him to complete his vow. This ridiculous devotee was therefore led round the city, by children, adorned with chaplets, and then put to death, being thrown headlong from the ramparts. Another, named *Secundus*, had vowed to fight in the amphitheatre upon the same occasion. To this he was also compelled, the emperor himself choosing to be a spectator of the combat. However, he was more fortunate than the former, being so successful as to kill his adversary, by which he obtained a release from his vow. Gemellus was the next who suffered from the tyrant's inhumanity. The pretence against him was, that he had wished the emperor might not recover, and that he had taken a counter-poison to secure him from any secret attempts against his life. Caligula ordered him to kill himself; but as the unfortunate youth was ignorant of the manner of doing it, the emperor's messengers soon instructed him in the fatal lesson. Silenus, the emperor's father-in-law, was the next that was put to death upon slight suspicions; and Gercinus, a senator of noted integrity, refusing to witness falsely against him, shared his fate. After these followed a crowd of victims to the emperor's avarice or suspicion. The pretext against

them was their enmity to his family; and in proof of his accusations he produced those very memorials which but a while before he pretended to have burnt. Among the number of those who were sacrificed to his jealousy, was Macro, the late favourite of Tiberius, and the person to whom Caligula owed his empire. He was accused of many crimes, some of which were common to the emperor as well as to him, and his death brought on the ruin of his whole family.

These cruelties, however, only seemed the first fruits of a mind naturally timid and suspicious: his vanity and profusion soon gave rise to others which were more atrocious, as they sprung from less powerful motives. His pride first began by assuming to himself the title of *ruler*, which was usually granted only to kings. He would also have taken the crown and diadem, had he not been advised that he was already superior to all the monarchs of the world. Not long after, he assumed divine honours, and gave himself the names of such divinities as he thought most agreeable to his nature. For this purpose he caused the heads of the statues of Jupiter and some other gods to be struck off, and his own to be put in their places. He frequently seated himself between Castor and Pollux, and ordered all who came to their temple to worship, should pay their adorations only to him; nay, at last he altered their temple to the form of a portico, which he joined to his palace, that the very gods, as he said, might serve him in the quality of porters.

He was not less notorious for the depravation of his appetites than for his ridiculous presumptions. Neither person, place, nor sex, were obstacles to the indulgence of his unnatural lusts. There was scarce a lady of any quality in Rome that escaped his lewdness; and, indeed, such was the degeneracy of the times, that there were few ladies who did not think this disgrace an honour. He committed incest with his three sisters, and at public feasts they lay with their heads upon his bosom by turns. Of these he prostituted Livia and Agrippina to his vile companions, and then banished them as adulteresses and conspirators against his person. As for Drusilla, he took her from her husband Longinus, and kept her as his wife. Her he loved so affectionately, that, being sick, he appointed her as heiress of his empire and fortune; and she happening to die before him, he made her a goddess. Nor did her example when living, appear more dangerous to the people than her divinity when dead. To mourn for her death was a crime, as she was become a goddess; and to rejoice for her divinity was capital, because she was dead. Nay, even silence itself was an unpardonable insensibility, either of the emperor's loss or his sister's advancement. Thus he made his sister subservient to his profit, as before he had done to his pleasure; raising vast sums of money by granting pardons to some, and by confiscating the goods of others. As to his marriages, whether he contracted them with greater levity, or dissolved them with greater injustice, is not easy to determine. Being present at the nuptials of Livia Orestilla with Piso, as soon as the solemnity was over, he commanded her to be brought to him as his own wife, and then dismissed her in a few days. He soon after banished her upon suspicion of cohabiting with her husband after she was parted from him. He was enamoured of Lollia Paulina, upon a bare relation of her grand-

Rome.

Rome. mother's beauty; and thereupon took her from her husband, who commanded in Macedonia: notwithstanding which, he repudiated her as he had done the former, and likewise forbade her future marrying with any other. The wife who caught most firmly upon his affections was Milonia Cæsonia, whose chief merit lay in her perfect acquaintance with all the alluring arts of her sex, for she was otherwise possessed neither of youth nor beauty. She continued with him during his reign; and he loved her so ridiculously, that he sometimes showed her to his soldiers dressed in armour, and sometimes to his companions stark naked.

But of all his vices, his prodigality was the most remarkable, and that which in some measure gave rise to the rest. The luxuries of former emperors were simplicity itself, when compared to those which he practised. He contrived new ways of bathing, where the richest oils and most precious perfumes were exhausted with the utmost profusion. He found out dishes of immense value; and had even jewels, as we are told, dissolved among his sauces. He sometimes had services of pure gold presented before his guests instead of meat; observing, that a man should be an economist or an emperor.

For several days together he flung considerable sums of money among the people. He ordered ships of a prodigious bulk to be built of cedar, the stems of ivory inlaid with gold and jewels, the sails and tackling of various silks, while the decks were planted with the choicest fruit trees, under the shade of which he often dined. Here, attended by all the ministers of his pleasures, the most exquisite fingers, and the most beautiful youths, he coasted along the shore of Campania with great splendor. All his buildings seemed rather calculated to raise astonishment, than to answer the purposes of utility. But the most notorious instance of his fruitless profusion was the vast bridge at Puteoli, which he undertook in the third year of his reign. To satisfy his desire of being master as well of the ocean as the land, he caused an infinite number of ships to be fastened to each other, so as to make a floating bridge from Baia to Puteoli, across an arm of the sea three miles and an half broad. The ships being placed in two rows, in form of a crescent, were secured to each other with anchors, chains, and cables. Over these were laid vast quantities of timber, and upon that earth, so as to make the whole resemble one of the streets of Rome. He next caused several houses to be built upon his new bridge, for the reception of himself and his attendants, into which fresh water was conveyed by pipes from land. He then repaired thither with all his court, attended by prodigious throngs of people, who came from all parts to be spectators of such an expensive pageant. It was there that Caligula, adorned with all the magnificence of eastern royalty, sitting on horseback with a civic crown and Alexander's breast-plate, attended by the great officers of the army, and all the nobility of Rome, entered at one end of the bridge, and with ridiculous importance rode to the other. At night, the number of torches and other illuminations with which this expensive structure was adorned, cast such a gleam as illuminated the whole bay, and all the neighbouring mountains. This seemed to give the weak emperor new cause for exultation; boasting that he had turned night into day, as well as sea into land.

The next morning he again rode over in a triumphant chariot, followed by a numerous train of charioteers, and all his soldiers in glittering armour. He then ascended a rostrum erected for the occasion, where he made a solemn oration in praise of the greatness of his enterprise, and the assiduity of his workmen and his army. He then distributed rewards among his men, and a splendid feast succeeded. In the midst of the entertainment many of his attendants were thrown into the sea; several ships filled with spectators were attacked and sunk in an hostile manner; and although the majority escaped through the calmness of the weather, yet many were drowned; and some who endeavoured to save themselves by climbing to the bridge, were struck down again by the emperor's command. The calmness of the sea during this pageant, which continued for two days, furnished Caligula with fresh opportunities for boasting; being heard to say, "that Neptune took care to keep the sea smooth and serene, merely out of reverence to him."

Expences like these, it may be naturally supposed, must have exhausted the most unbounded wealth: in fact, after reigning about a year, Caligula found his revenues totally exhausted; and a fortune of about 18,000,000 of our money, which Tiberius had amassed together, entirely spent in extravagance and folly. Now, therefore, his prodigality put him upon new methods of supplying the exchequer; and as before his profusion, so now his rapacity became boundless. He put in practice all kinds of rapine and extortion; while his principal study seemed to be the inventing new imposts and illicit confiscations. Every thing was taxed, to the very wages of the meanest tradesman. He caused freemen to purchase their freedom a second time; and poisoned many who had named him for their heir, to have the immediate possession of their fortunes. He set up a brothel in his own palace, by which he gained considerable sums by all the methods of prostitution. He also kept a gaming-house, in which he himself presided, scrupling none of the meanest tricks in order to advance his gains. On a certain occasion having had a run of ill luck, he saw two rich knights passing through his court; upon which he suddenly rose up, and causing both to be apprehended, confiscated their estates, and then joining his former companions, boasted that he never had a better throw in his life. Another time, wanting money for a stake, he went down and caused several noblemen to be put to death; and then returning, told the company that they sat playing for trifles while he had won 60,000 sesterces at a cast.

Such insupportable and capricious cruelties produced many secret conspiracies against him; but these were for a while deferred, upon account of his intended expedition against the Germans and Britons, which he undertook in the third year of his reign. For this purpose, he caused numerous levies to be made in all parts of the empire; and talked with so much resolution, that it was universally believed he would conquer all before him. His march perfectly indicated the inequality of his temper: sometimes it was so rapid, that the cohorts were obliged to leave their standards behind them; at other times it was so slow, that it more resembled a pompous procession than a military expedition. In this disposition he would cause himself to be carried on eight men's shoulders, and order all the neighbouring

Rome.

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Ridiculous
expeditions
against Bri-
tain and
Germany.

Rome.

neighbouring cities to have their streets well swept and watered to defend him from the dust. However, all these mighty preparations ended in nothing. Instead of conquering Britain, he only gave refuge to one of its banished princes; and this he described in a letter to the senate, as taking possession of the whole island. Instead of conquering Germany, he only led his army to the sea shore in Batavia. There disposing his engines and warlike machines with great solemnity, and drawing up his men in order of battle, he went on board his galley, with which coasting along, he commanded his trumpets to sound and the signal to be given as if for an engagement; upon which, his men having had previous orders, immediately fell to gathering the shells that lay upon the shore into their helmets, terming them the *spoils of the conquered ocean, worthy of the palace and the capitol*. After this doughty expedition, calling his army together as a general after victory, he harangued them in a pompous manner, and highly extolled their achievements; and then distributing money among them, dismissed them with orders to be joyful, and congratulated them upon their riches. But that such exploits should not pass without a memorial, he caused a lofty tower to be erected by the sea-side; and ordered the galleys in which he had put to sea to be conveyed to Rome in a great measure by land.

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Meanness
of the se-
nate.

After numberless instances of folly and cruelty in this expedition, among which he had intentions of destroying the whole army that had formerly mutinied under his father Germanicus, he began to think of a triumph. The senate, who had long been the timid ministers of his pride and cruelty, immediately set about consulting how to satisfy his expectations. They considered that a triumph would, even to himself, appear as a burlesque upon his expedition: they therefore decreed him only an ovation. Having come to this resolution, they sent him a deputation, informing him of the honours granted him, and the decree, which was drawn up in terms of the most extravagant adulation. However, their flattery was far from satisfying his pride. He considered their conduct rather as a diminution of his power, than an addition to his glory. He therefore ordered them, on pain of death, not to concern themselves with his honours; and being met by their messengers on the way, who invited him to come and partake of the preparations which the senate had decreed, he informed them that he would come; and then laying his hand upon his sword, added, that he would bring that also with him. In this manner, either quite omitting his triumph, or deferring it to another time, he entered the city with only an ovation; while the senate passed the whole day in acclamations in his praise, and speeches filled with the most excessive flattery. This conduct in some measure served to reconcile him, and soon after their excessive zeal in his cause entirely gained his favour. For it happened that Protogenes, who was one of the most intimate and the most cruel of his favourites, coming into the house, was fawned upon by the whole body of the senate, and particularly by Proculus. Whereupon Protogenes with a fierce look, asked how one who was such an enemy to the emperor could be such a friend to him? There needed no more to excite the senate against Proculus. They instantly seized upon him, and violently tore him

in pieces; plainly showing by their conduct, that tyranny in a prince produces cruelty in those whom he governs.—It was after returning from this extravagant expedition, that he was waited upon by a deputation of the Jews of Alexandria, who came to deprecate his anger for not worshipping his divinity as other nations had done. The emperor gave them a very ungracious reception, and would probably have destroyed their countrymen if he had not soon after been cut off.

This affair of the Jews remained undecided during his reign; but it was at last settled by his successor to their satisfaction. It was upon this occasion that Philo made the following remarkable answer to his associates, who were terrified with apprehensions of the emperor's indignation; "Fear nothing (cried he to them), Caligula, by declaring against us, puts God on our side."

The continuation of this horrid reign seemed to threaten universal calamity: however, it was but short. There had already been several conspiracies formed to destroy the tyrant, but without success. That which at last succeeded in delivering the world of this monster, was concerted under the influence of Cassius Cherea, tribune of the prætorian bands. This was a man of experienced courage, an ardent admirer of freedom, and consequently an enemy to tyrants. Besides the motives which he had in common with other men, he had received repeated insults from Caligula, who took all occasions of turning him into ridicule, and impeaching him of cowardice, merely because he had an effeminate voice. Whenever Cherea came to demand the watch-word from the emperor, according to custom, he always gave him either Venus, Adonis, or some such, implying effeminacy and softness. He therefore secretly imparted his designs to several senators and knights, whom he knew to have received personal injuries from Caligula, or to be apprehensive of those to come. Among these was Valerius Asiaticus, whose wife the emperor had debauched. Annius Vinctianus, who was suspected of having been in a former conspiracy, was now desirous of really engaging in the first design that offered. Besides these, were Clemens the prefect; and Calistus, whose riches made him obnoxious to the tyrant's resentment.

While these were deliberating upon the most certain and speedy method of destroying the tyrant, an unexpected incident gave new strength to the conspiracy. Pompedius, a senator of distinction, having been accused before the emperor, of having spoken of him with disrespect, the informer cited one Quintilia, an actress, to confirm his accusation. Quintilia, however, was possessed of a degree of fortitude not easily found. She denied the fact with obstinacy; and being put to the torture at the informer's request, she bore the severest torments of the rack with unshaken constancy. But what is most remarkable of her resolution is, that she was acquainted with all the particulars of the conspiracy; and although Cherea was appointed to preside at her torture, she revealed nothing: on the contrary, when she was led to the rack, she trod upon the toe of one of the conspirators, intimating at once her knowledge of the confederacy, and her own resolution not to divulge it. In this manner she suffered until all her limbs were dislocated; and in that deplorable state was presented to the emperor, who ordered her a gratuity for what she had suffered. Cherea could now no longer

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A conspi-
acy form-
ed against
the empe-
ror.

ger

Rome. ger contain his indignation at being thus made the instrument of a tyrant's cruelty. He therefore proposed to the conspirators to attack him as he went to offer sacrifices in the Capitol, or while he was employed in the secret pleasures of the palace. The rest, however, were of opinion, that it was best to fall upon him when he should be unattended; by which means they would be more certain of success. After several deliberations, it was at last resolved to attack him during the continuance of the Palatine games, which lasted four days; and to strike the blow when his guards should have the least opportunity to defend him. In consequence of this, the three first days of the games passed without affording that opportunity which was so ardently desired. Cherea now, therefore, began to apprehend, that deferring the time of the conspiracy might be a mean to divulge it: he even began to dread, that the honour of killing the tyrant might fall to the lot of some other person more bold than himself. Wherefore, he at last resolved to defer the execution of his plot only to the day following, when Caligula should pass through a private gallery, to some baths not far distant from the palace.

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Who is
murdered.

The last day of the games was more splendid than the rest; and Caligula seemed more sprightly and condescending than usual. He took great amusement in seeing the people scramble for the fruits and other rarities thrown by his order among them; and seemed no way apprehensive of the plot formed for his destruction. In the mean time, the conspiracy began to transpire; and had he possessed any friends, it could not have failed of being discovered. The conspirators waited a great part of the day with the most extreme anxiety; and at one time Caligula seemed resolved to spend the whole day without any refreshment. This unexpected delay entirely exasperated Cherea; and had he not been restrained, he would have gone and perpetrated his design in the midst of all the people. Just at that instant, while he was yet hesitating what he should do, Asprenas, one of the conspirators, persuaded Caligula to go to the bath and take some slight refreshment, in order to enjoy the rest of the entertainment with greater relish. The emperor therefore rising up, the conspirators used every precaution to keep off the throng, and to surround him, under pretence of greater affluity. Upon entering into the little vaulted gallery that led to the bath, he was met by a band of Grecian children who had been instructed in singing, and were come to perform in his presence. He was once more therefore going to return into the theatre with them, had not the leader of the band excused himself, as having a cold. This was the moment that Cherea seized to strike him to the ground; crying out, "Tyrant, think upon this." Immediately after, the other conspirators rushed in; and while the emperor continued to resist, crying out, that he was not yet dead, they dispatched him with 30 wounds, in the 29th year of his age, after a short reign of three years ten months and eight days. With him, his wife and infant daughter also perished; the one being stabbed by a centurion, the other having its brains dashed out against the wall. His coin was also melted down by a decree of the senate; and such precautions were taken, that all seemed willing, that neither his features nor his name might be transmitted to posterity.

As soon as the death of Caligula was made public, it produced the greatest confusion in all parts of the city. The conspirators, who only aimed at destroying a tyrant without attending to a successor, had all sought safety by retiring to private places. Some thought the report of the emperor's death was only an artifice of his own, to see how his enemies would behave. Others averred that he was still alive, and actually in a fair way to recover. In this interval of suspense, the German guards finding it a convenient time to pillage, gave a loose to their licentiousness, under a pretence of revenging the emperor's death. All the conspirators and senators that fell in their way received no mercy: Asprenas, Norbanus, and Anteius, were cut in pieces. However, they grew calm by degrees, and the senate was permitted to assemble, in order to deliberate upon what was necessary to be done in the present emergency.

In this deliberation, Saturninus, who was then consul, insisted much upon the benefits of liberty; and talked in raptures of Cherea's fortitude, alleging that it deserved the highest reward. This was a language highly pleasing to the senate. Liberty now became the favourite topic; and they even ventured to talk of extinguishing the very name of Cæsar. Impressed with this resolution, they brought over some cohorts of the city to their side, and boldly seized upon the Capitol. But it was now too late for Rome to regain her pristine freedom; the populace and the army opposing their endeavours. The former were still mindful of their ancient hatred to the senate; and remembered the donations and public spectacles of the emperors with regret. The latter were sensible they could have no power but in a monarchy; and had some hopes that the election of the emperor would fall to their determination. In this opposition of interests, and variety of opinions, chance seemed at last to decide the fate of the empire. Some soldiers happening to run about the palace, discovered Claudius, Caligula's uncle, lurking in a secret place, where he had hid himself through fear. Of this personage, who had hitherto been despised for his imbecillity, they resolved to make an emperor: and accordingly carried him upon their shoulders to the camp, where they proclaimed him at a time he expected nothing but death.

The senate now, therefore, perceiving that force alone was likely to settle the succession, were resolved to submit, since they had no power to oppose. Claudius was the person most nearly allied to the late emperor, then living; being the nephew of Tiberius, and the uncle of Caligula. The senate therefore passed a decree, confirming him in the empire; and went soon after in a body, to render him their compulsive homage. Cherea was the first who fell a sacrifice to the jealousy of this new monarch. He met death with all the fortitude of an ancient Roman; desiring to die by the same sword with which he had killed Caligula. Lupus, his friend, was put to death with him; and Sabinus, one of the conspirators, laid violent hands on himself.

Claudius was 50 years old when he began to reign. The complicated diseases of his infancy had in some measure affected all the faculties both of his body and mind. He was continued in a state of pupillage much longer than was usual at that time; and seemed, in every

Rome.

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Great confusion ensues on his death.

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Claudius made emperor.

Rome. every part of his life incapable of conducting himself. Not that he was entirely destitute of understanding, since he had made a tolerable proficiency in the Greek and Latin languages, and even wrote an history of his own time; which, however destitute of other merit, was not contemptible in point of style. Nevertheless, with this share of erudition, he was unable to advance himself in the state, and seemed utterly neglected until he was placed all at once at the head of affairs. The commencement of his reign gave the most promising hopes of an happy continuance. He began by passing an act of oblivion for all former words and actions, and disannulled all the cruel edicts of Caligula. He forbade all persons, upon severe penalties, to sacrifice to him as they had done to Caligula; was assiduous in hearing and examining complaints; and frequently administered justice in person; tempering by his mildness the severity of the law. We are told of his bringing a woman to acknowledge her son, by adjudging her to marry him. The tribunes of the people coming one day to attend him when he was on his tribunal, he courteously excused himself for not having room for them to sit down. By this deportment he so much gained the affections of the people, that upon a vague report of his being slain by surprise, they ran about the streets in the utmost rage and consternation, with horrid imprecations against all such as were necessary to his death; nor could they be appeased, until they were assured, with certainty, of his safety. He took a more than ordinary care that Rome should be continually supplied with corn and provisions, securing the merchants against pirates. He was not less assiduous in his buildings, in which he excelled almost all that went before him. He constructed a wonderful aquæduct, called after his own name, much surpassing any other in Rome, either for workmanship or plentiful supply. It brought water from 40 miles distance, through great mountains, and over deep valleys; being built on stately arches, and furnishing the highest parts of the city. He made also an haven at Ostia; a work of such immense expence, that his successors were unable to maintain it. But his greatest work of all was the draining of the lake Fucinus, which was the largest in Italy, and bringing its water into the Tiber, in order to strengthen the current of that river. For effecting this, among other vast difficulties, he mined through a mountain of stone three miles broad, and kept 30,000 men employed for 11 years together.

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His happy
administra-
tion in the
beginning
of his reign.

To this solicitude for the internal advantages of the state, he added that of a watchful guardianship over the provinces. He restored Judea to Herod Agrippa, which Caligula had taken from Herod Antipas, his uncle, the man who had put John the Baptist to death, and who was banished by order of the present emperor. Claudius also restored such princes to their kingdoms as had been unjustly dispossessed by his predecessors; but deprived the Lycians and Rhodians of their liberty, for having promoted insurrections, and crucified some citizens of Rome.

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His expedi-
tion against
Britain.

He even undertook to gratify the people by foreign conquest. The Britons, who had, for near 100 years, been left in sole possession of their own island, began to seek the mediation of Rome, to quell their intestine commotions. The principal man who desired to sub-
ject his native country to the Roman dominion, was

one Bericus, who, by many arguments, persuaded the emperor to make a descent upon the island, magnifying the advantages that would attend the conquest of it. In pursuance of his advice, therefore, Plautius the prætor was ordered to pass over into Gaul, and make preparations for this great expedition. At first, indeed, his soldiers seemed backward to embark; declaring, that they were unwilling to make war beyond the limits of the world, for so they judged Britain to be. However, they were at last persuaded to go; and the Britons, under the conduct of their king Cynobelinus, were several times overthrown. And these successes soon after induced Claudius to go into Britain in person, upon pretence that the natives were still seditious, and had not delivered up some Roman fugitives who had taken shelter among them; but for a particular account of the exploits of the Romans in this island, see the article ENGLAND.

But though Claudius gave in the beginning of his reign the highest hopes of an happy continuance, he soon began to lessen his care for the public, and to commit to his favourites all the concerns of the empire. This weak prince was unable to act but under the direction of others. The chief of his directors was his wife Messalina: whose name is almost become a common appellation to women of abandoned characters. However, she was not less remarkable for her cruelties than her lusts; as by her intrigues she destroyed many of the most illustrious families of Rome. Subordinate to her were the emperor's freedmen; Pallas, the treasurer; Narcissus, the secretary of state; and Callistus, the master of the requests. These entirely governed Claudius; so that he was only left the fatigues of ceremony, while they were possessed of all the power of the state.

It would be tedious to enumerate the various cruelties which these insidious advisers obliged the feeble emperor to commit: those against his own family will suffice. Appius Silanus, a person of great merit, who had been married to the emperor's mother-in-law, was put to death upon the suggestions of Messalina. After him he slew both his sons-in-law, Silanus and Pompey, and his two nieces the Livias, one the daughter of Drusus, the other of Germanicus; and all without permitting them to plead in their defence, or even without assigning any cause for his displeasure. Great numbers of others fell a sacrifice to the jealousy of Messalina and her minions; who bore so great a sway in the state, that all offices, dignities, and governments, were entirely at their disposal. Every thing was put to sale: they took money for pardons and penalties; and accumulated, by these means, such vast sums, that the wealth of Cræsus was considered as nothing in comparison. One day, the emperor complaining that his exchequer was exhausted, he was ludicrously told, that it might be sufficiently replenished if his two freedmen would take him into partnership. Still, however, during such corruption, he regarded his favourites with the highest esteem, and even solicited the senate to grant them peculiar marks of their approbation. These disorders in the ministers of government did not fail to produce conspiracies against the emperor. Statius Corvinus and Gallus Asinius formed a conspiracy against him. Two knights, whose names are not told us, privately combined to assassinate him. But the revolt which

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Is induced
by his fa-
vourites to
commit
many acts
of cruelty.

Rome. which gave him the greatest uneasiness, and which was punished with the most unrelenting severity, was that of Camillus, his lieutenant-general in Dalmatia. This general, incited by many of the principal men of Rome, openly rebelled against him, and assumed the title of emperor. Nothing could exceed the terrors of Claudius, upon being informed of this revolt: his nature and his crimes had disposed him to be more cowardly than the rest of mankind; so that when Camillus commanded him by letters to relinquish the empire, and retire to a private station, he seemed inclined to obey. However, his fears upon this occasion were soon removed: for the legions which had declared for Camillus being terrified by some prodigies, shortly after abandoned him; so that the man whom but five days before they had acknowledged as emperor, they now thought it no infamy to destroy. The cruelty of Messalina and her minions upon this occasion seemed to have no bounds. They so wrought upon the emperor's fears and suspicions, that numbers were executed without trial or proof; and scarce any, even of those who were but suspected, escaped, unless by ransoming their lives with their fortunes.

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Their infamous conduct.

By such cruelties as these, the favourites of the emperor endeavoured to establish his and their own authority; but in order to increase the necessity of their assistance, they laboured to augment the greatness of his terrors. He now became a prey to jealousy and inquietude. Being one day in the temple, and finding a sword that was left there by accident, he convened the senate in a fright, and informed them of his danger. After this he never ventured to go to any feast without being surrounded by his guards, nor would he suffer any man to approach him without a previous search. Thus wholly employed by his anxiety for self-preservation, he entirely left the care of the state to his favourites, who by degrees gave him a relish for slaughter. From this time he seemed delighted with inflicting tortures; and on a certain occasion continued a whole day at the city Tibur, waiting for an hangman from Rome, that he might feast his eyes with an execution in the manner of the ancients. Nor was he less regardless of the persons he condemned, than cruel in the infliction of their punishment. Such was his extreme stupidity, that he would frequently invite those to supper whom he had put to death but the day before; and often denied the having given orders for an execution, but a few hours after pronouncing sentence. Suetonius assures us, that there were no less than 35 senators, and above 300 knights, executed in his reign; and that such was his unconcern in the midst of slaughter, that one of the tribunes bringing him an account of a certain senator who was executed, he quite forgot his offence, but calmly acquiesced in his punishment.

294
Extravagant lewdness of the empress Messalina.

In this manner was Claudius urged on by Messalina to commit cruelties, which he considered only as wholesome severities; while, in the mean time, she put no bounds to her enormities. The impunity of her past vices only increasing her confidence to commit new, her debaucheries became every day more notorious, and her lewdness exceeded what had ever been seen at Rome. She caused some women of the first quality to commit adultery in the presence of their husbands, and destroyed such as refused to comply. After appearing for

some years insatiable in her desires, she at length fixed her affections upon Caius Silius, the most beautiful youth in Rome. Her love for the young Roman seemed to amount even to madness. She obliged him to divorce his wife Junia Syllana, that she might entirely possess him herself. She obliged him to accept of immense treasures and valuable presents; cohabiting with him in the most open manner, and treating him with the most shameless familiarity. The very imperial ornaments were transferred to his house; and the emperor's slaves and attendants had orders to wait upon the adulterer. Nothing was wanting to complete the insolence of their conduct, but their being married together; and this was soon after effected. They relied upon the emperor's imbecility for their security, and only waited till he retired to Ostia to put their ill-judged project in execution. In his absence, they celebrated their nuptials with all the ceremonies and splendor which attend the most confident security. Messalina gave a loose to her passion, and appeared as a Bacchanalian with a thyrsus in her hand; while Silius assumed the character of Bacchus, his body being adorned with robes imitating ivy, and his legs covered with buskins. A troop of singers and dancers attended, who heightened the revel with the most lascivious songs and the most indecent attitudes. In the midst of this riot, one Valens, a buffoon, is said to have climbed a tree; and being demanded what he saw, answered that he perceived a dreadful storm coming from Ostia. What this fellow spoke at random was actually at that time in preparation. It seems that some time before there had been a quarrel between Messalina and Narcissus, the emperor's first freedman. This subtle minister therefore desired nothing more than an opportunity of ruining the empress, and he judged this to be a most favourable occasion. He first made the discovery by means of two concubines who attended the emperor, who were instructed to inform him of Messalina's marriage as the news of the day, while Narcissus himself stepped in to confirm their information. Finding it operated upon the emperor's fears as he could wish, he resolved to alarm him still more by a discovery of all Messalina's projects and attempts. He aggravated the danger, and urged the expediency of speedily punishing the delinquents. Claudius, quite terrified at so unexpected a relation, supposed the enemy were already at his gates; and frequently interrupted his freedman, by asking if he was still master of the empire. Being assured that he yet had it in his power to continue so, he resolved to go and punish the affront offered to his dignity without delay. Nothing could exceed the consternation of Messalina and her thoughtless companions, upon being informed that the emperor was coming to disturb their festivity. Every one retired in the utmost confusion. Silius was taken. Messalina took shelter in some gardens which she had lately seized upon, having expelled Asiaticus the true owner, and put him to death. From thence she sent Britannicus, her only son by the emperor, with Octavia her daughter, to intercede for her, and implore his mercy. She soon after followed them herself; but Narcissus had so fortified the emperor against her arts, and contrived such methods of diverting his attention from her defence, that she was obliged to return in despair. Narcissus being thus far successful, led Claudius

Rome.

Rome.

to the house of the adulterer, there showing him the apartments adorned with the spoils of his own palace; and then conducting him to the prætorian camp, revived his courage by giving him assurances of the readiness of the soldiers to defend him. Having thus artfully wrought upon his fears and resentment, the wretched Silius was commanded to appear; who, making no defence, was instantly put to death in the emperor's presence. Several others shared the same fate; but Messalina still flattered herself with hopes of pardon. She resolved to leave neither prayers nor tears, unattempted to appease the emperor. She sometimes even gave a loose to her resentment, and threatened her accusers with vengeance. Nor did she want ground for entertaining the most favourable expectations. Claudius having returned from the execution of her paramour, and having allayed his resentment in a banquet, began to relent. He now therefore commanded his attendants to apprise that miserable creature, meaning Messalina, of his resolution to hear her accusation the next day, and ordered her to be in readiness with her defence. The permission to defend herself would have been fatal to Narcissus; wherefore he rushed out, and ordered the tribunes and centurions who were in readiness to execute her immediately by the emperor's command. Claudius was informed of her death in the midst of his banquet; but this insensible idiot showed not the least appearance of emotion. He continued at table with his usual tranquillity; and the day following, while he was sitting at dinner, he asked why Messalina was absent, as if he had totally forgotten her crimes and her punishment.

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She is put
to death.

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The emperor
marries
Agrippina,

Claudius being now a widower, declared publicly, that as he had hitherto been unfortunate in his marriages, he would remain single for the future, and that he would be contented to forfeit his life in case he broke his resolution. However, the resolutions of Claudius were but of short continuance. Having been accustomed to live under the controul of women, his present freedom was become irksome to him, and he was entirely unable to live without a director. His freedmen therefore perceiving his inclinations, resolved to procure him another wife; and, after some deliberation, they fixed upon Agrippina, the daughter of his brother Germanicus. This woman was more practised in vice than even the former empress. Her cruelties were more dangerous, as they were directed with greater caution: she had poisoned her former husband, to be at liberty to attend the calls of ambition; and, perfectly acquainted with all the infirmities of Claudius, only made use of his power to advance her own. However, as the late declaration of Claudius seemed to be an obstacle to his marrying again, persons were suborned to move in the senate, that he should be compelled to take a wife, as a matter of great importance to the commonwealth; and some more determined flatterers than the rest left the house, as with a thorough resolution, that instant, to constrain him. When this decree passed in the senate, Claudius had scarce patience to contain himself a day before the celebration of his nuptials. However, such was the detestation in which the people in general held these incestuous matches, that though they were made lawful, yet only one of his tribunes, and one of his freedmen, followed his example.

Claudius having now received a new director, sub-

mitted with more implicit obedience than in any former part of his reign. Agrippina's chief aims were to gain the succession in favour of her own son Nero, and to set aside the claims of young Britannicus, son to the emperor and Messalina. For this purpose she married Nero to the emperor's daughter Octavia, a few days after her own marriage. Not long after this, she urged the emperor to strengthen the succession, in imitation of his predecessors, by making a new adoption; and caused him take in her son Nero, in some measure to divide the fatigues of government. Her next care was to increase her son's popularity, by giving him Seneca for a tutor. This excellent man, by birth a Spaniard, had been banished by Claudius, upon the false testimony of Messalina, who had accused him of adultery with Julia the emperor's niece. The people loved and admired him for his genius, but still more for his strict morality; and a part of his reputation necessarily devolved to his pupil. This subtle woman was not less assiduous in pretending the utmost affection for Britannicus; whom, however, she resolved in a proper time to destroy: but her jealousy was not confined to this child only; she, shortly after her accession, procured the deaths of several ladies who had been her rival in the emperor's affections. She displaced the captains of the guard, and appointed Burrhus to that command; a person of great military knowledge, and strongly attached to her interests. From that time she took less pains to disguise her power, and frequently entered the Capitol in a chariot; a privilege which none before were allowed, except of the sacerdotal order.

In the 12th year of this monarch's reign, she persuaded him to restore liberty to the Rhodians, of which he had deprived them some years before; and to remit the taxes of the city Ilium, as having been the progenitors of Rome. Her design in this was to increase the popularity of Nero, who pleaded the cause of both cities with great approbation. Thus did this ambitious woman take every step to aggrandize her son, and was even contented to become hateful herself to the public, merely to increase his popularity.

Such a very immoderate abuse of her power served at last to awaken the emperor's suspicions. Agrippina's imperious temper began to grow insupportable to him; and he was heard to declare, when heated with wine, that it was his fate to suffer the disorders of his wives, and to be their executioner. This expression sunk deep on her mind, and engaged all her faculties to prevent the blow. Her first care was to remove Narcissus, whom she hated upon many accounts, but particularly for his attachment to Claudius. This minister, for some time, opposed her designs; but at length thought fit to retire, by a voluntary exile, into Campania. The unhappy emperor, thus exposed to all the machinations of his insidious consort, seemed entirely regardless of the dangers that threatened his destruction. His affection for Britannicus was perceived every day to increase, which served also to increase the vigilance and jealousy of Agrippina. She now, therefore, resolved not to defer a crime which she had meditated a long while before; namely, that of poisoning her husband. She for some time, however, debated with herself in what manner she should administer the poison; as she feared too strong a dose would discover her treachery, and one too weak might fail of its effect.

Rome.

Rome.

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By whom
he is poi-
soned.

At length she determined upon a poison of singular efficacy to destroy his intellects, and yet not suddenly to terminate his life. As she had been long conversant in this horrid practice, she applied to a woman called *Locusta*, notorious for assisting on such occasions. The poison was given to the emperor among mushrooms, a dish he was particularly fond of. Shortly after having eaten, he dropped down insensible; but this caused no alarm, as it was usual with him to sit eating till he had stupified all his faculties, and was obliged to be carried off to his bed from the table. However, his constitution seemed to overcome the effects of the poison, when Agrippina resolved to make sure of him: wherefore she directed a wretched physician, who was her creature, to thrust a poisoned feather down his throat, under pretence of making him vomit; and this dispatched him.

The reign of the emperor, feeble and impotent as he was, produced no great calamities in the state, since his cruelties were chiefly levelled at those about his person. The list of the inhabitants of Rome at this time amounted to six millions eight hundred and forty-four thousand souls; a number little inferior to all the people of England at this day. The general character of the times was that of corruption and luxury: but the military spirit of Rome, though much relaxed from its former severity, still continued to awe mankind; and though during this reign, the empire might be justly said to be without a head, yet the terror of the Roman name alone kept the nations in obedience.

Claudius being destroyed, Agrippina took every precaution to conceal his death from the public, until she had settled her measures for securing the succession. A strong guard was placed at all the avenues of the palace, while she amused the people with various reports; at one time giving out that he was still alive; at another, that he was recovering. In the meanwhile, she made sure of the person of young Britannicus, under a pretence of affection for him. Like one overcome with the extremity of her grief, she held the child in her arms, calling him the dear image of his father, and thus preventing his escape. She used the same precautions with regard to his sisters, Octavia and Antonia; and even ordered an entertainment in the palace, as if to amuse the emperor. At last, when all things were adjusted, the palace-gates were thrown open, and Nero, accompanied by Burrhus, prefect of the Prætorian guards, issued to receive the congratulations of the people and the army. The cohorts then attending, proclaimed him with the loudest acclamations, though not without making some inquiries after Britannicus. He was carried in a chariot to the rest of the army; wherein having made a speech proper to the occasion, and promising them a donation, in the manner of his predecessors, he was declared emperor by the army, the senate, and the people.

Nero's first care was, to show all possible respect to the deceased emperor, in order to cover the guilt of his death. His obsequies were performed with a pomp equal to that of Augustus: the young emperor pronounced his funeral oration, and he was canonized among the gods. The funeral oration, though spoken by Nero, was drawn up by Seneca; and it was remarked, that this was the first time a Roman emperor needed the assistance of another's eloquence.

Rome.

Nero, though but 17 years of age, began his reign with the general approbation of mankind. As he owed the empire to Agrippina, so in the beginning he submitted to her directions with the most implicit obedience. On her part, she seemed resolved on governing with her natural ferocity, and considered her private animosities as the only rule to guide her in public justice. Immediately after the death of Claudius, she caused Silanus, the pro-consul of Asia, to be assassinated upon very slight suspicions, and without ever acquainting the emperor with her design. The next object of her resentment was Narcissus, the late emperor's favourite; a man equally notorious for the greatness of his wealth and the number of his crimes. He was obliged to put an end to his life by Agrippina's order, though Nero refused his consent.

This bloody onset would have been followed by many severities of the same nature, had not Seneca and Burrhus, the emperor's tutor and general, opposed. These worthy men, although they owed their rise to the empress, were above being the instruments of her cruelty. They, therefore, combined together in an opposition; and gaining the young emperor on their side, formed a plan of power, at once the most merciful and wise. The beginning of this monarch's reign, while he continued to act by their counsels, has always been considered as a model for succeeding princes to govern by. The famous emperor Trajan used to say, "That for the first five years of this prince all other governments came short of his." In fact, the young monarch knew so well how to conceal his innate depravity, that his nearest friends could scarce perceive his virtues to be but assumed. He appeared just, liberal, and humane. When a warrant for the execution of a criminal was brought to him to be signed, he was heard to cry out, with seeming concern, "Would to Heaven that I had never learned to write!" The senate, upon a certain occasion, giving him their applause for the regularity and justice of his administration; he replied with singular modesty, "That they should defer their thanks till he had deserved them." His condescension and affability were not less than his other virtues; so that the Romans began to think, that the clemency of this prince would compensate for the tyranny of his predecessors.

In the mean time, Agrippina, who was excluded from any share in government, attempted, by every possible method, to maintain her declining power. Perceiving that her son had fallen in love with a freed-woman, named *Acte*, and dreading the influence of a concubine, she tried every art to prevent his growing passion. However, in so corrupt a court, it was no difficult matter for the emperor to find other confidants ready to assist him in his wishes. The gratification of his passion, therefore, in this instance, only served to increase his hatred for the empress. Nor was it long before he gave evident marks of his disobedience, by displacing Pallas her chief favourite. It was upon this occasion that she first perceived the total declension of her authority; which threw her into the most ungovernable fury. In order to give terror to her rage, she proclaimed that Britannicus, the real heir to the throne, was still living, and in a condition to receive his father's empire, which was now possessed by an usurper. She threatened to go to the camp, and

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His excel-
lent admi-
nistration
for five
years.

300

He pro-
vokes his
mother.

Rome. there expose his baseness and her own, invoking all the furies to her assistance. These menaces served to alarm the suspicions of Nero; who, though apparently guided by his governors, yet had begun to give way to his natural depravity. He, therefore, determined upon the death of Britannicus, and contrived to have him poisoned at a public banquet. Agrippina, however, still retained her natural ferocity: she took every opportunity of obliging and flattering the tribunes and centurions; she heaped up treasures with a rapacity beyond her natural avarice; all her actions seemed calculated to raise a faction, and make herself formidable to the emperor. Whereupon Nero commanded her German guard to be taken from her, and obliged her to lodge out of the palace. He also forbid particular persons to visit her, and went himself but rarely and ceremoniously to pay her his respects. She now, therefore, began to find, that, with the emperor's favour, she had lost the assiduity of her friends. She was even accused by Silana of conspiring against her son, and of designing to marry Plautius, a person descended from Augustus, and of making him emperor. A short time after, Pallas, her favourite, together with Burrhus, were arraigned for a similar offence, and intending to set up Cornelius Sylla. These informations being proved void of any foundation, the informers were banished; a punishment which was considered as very inadequate to the greatness of the offence.

301
Poisons his
brother.

As Nero increased in years, his crimes seemed to increase in equal proportion. He now began to find a pleasure in running about the city by night, disguised like a slave. In this vile habit he entered taverns and brothels, attended by the lewd ministers of his pleasures, attempting the lives of such as opposed him, and frequently endangering his own. In imitation of the emperor's example, numbers of profligate young men infested the streets likewise; so that every night the city was filled with tumult and disorder. However, the people bore all these levities, which they ascribed to the emperor's youth, with patience, having occasion every day to experience his liberality, and having also been gratified by the abolition of many of their taxes. The provinces also were no way affected by these riots; for except disturbances on the side of the Parthians, which were soon suppressed, they enjoyed the most perfect tranquillity.

But those sensualities, which, for the first four years of his reign, produced but few disorders, in the fifth became alarming. He first began to transgress the bounds of decency, by publicly abandoning Octavia, his present wife, and then by taking Poppea, the wife of his favourite Otho, a woman more celebrated for her beauty than her virtues. This was another grating circumstance to Agrippina, who vainly used all her interest to disgrace Poppea, and reinstate herself in her son's lost favour. Historians assert, that she even offered to satisfy his passion herself, by an incestuous compliance; and that, had not Seneca interposed, the son would have joined in the mother's crime. This, however, does not seem probable, since we find Poppea victorious, soon after, in the contention of interests; and at last impelling Nero to parricide, to satisfy her revenge. She began her arts by urging him to divorce his present wife, and marry herself: she reproached him as a pupil, who wanted not only power over others, but

liberty to direct himself. She insinuated the dangerous designs of Agrippina; and, by degrees, accustomed his mind to reflect on parricide without horror. His cruelties against his mother began rather by various circumstances of petty malice than by any downright injury. He encouraged several persons to tease her with litigious suits; and employed some of the meanest of the people to sing satirical songs against her, under her windows: but, at last, finding these ineffectual in breaking her spirit, he resolved on putting her to death. His first attempt was by poison; but this, though twice repeated, proved ineffectual, as she had fortified her constitution against it by antidotes. This failing, a ship was contrived in so artificial a manner as to fall to pieces in the water; on board of which she was invited to sail to the coasts of Calabria. However, this plot was as ineffectual as the former: the mariners, not being apprised of the secret, disturbed each other's operations; so that the ship not sinking as readily as was expected, Agrippina found means to continue swimming, till she was taken up by some trading vessels passing that way. Nero finding all his machinations were discovered, resolved to throw off the mask, and put her openly to death, without further delay. He therefore caused a report to be spread, that she had conspired against him, and that a poniard was dropped at his feet by one who pretended a command from Agrippina to assassinate him. In consequence of this, he applied to his governors Seneca and Burrhus, for their advice how to act, and their assistance in ridding him of his fears. Things were now come to such a crisis, that no middle way could be taken; and either Nero or Agrippina was to fall. Seneca, therefore, kept a profound silence; while Burrhus, with more resolution, refused to be perpetrator of so great a crime; alleging, that the army was entirely devoted to all the descendants of Cæsar, and would never be brought to imbrue their hands in the blood of any of his family. In this embarrassment, Anicetus, the contriver of the ship above-mentioned, offered his services; which Nero accepted with the greatest joy, crying out, "That then was the first moment he ever found himself an emperor." This freedman, therefore, taking with him a body of soldiers, surrounded the house of Agrippina, and then forced open the doors. The executioners having dispatched her with several wounds, left her dead on the couch, and went to inform Nero of what they had done. Some historians say, that Nero came immediately to view the body; that he continued to gaze upon it with pleasure, and ended his horrid survey, by coolly observing, that he never thought his mother had been so handsome.—However this be, he vindicated his conduct next day to the senate; who not only excused, but applauded his impiety.

All the bounds of virtue being thus broken down, Nero now gave a loose to his appetites, that were not only fordid but inhuman. There seemed an odd contrast in his disposition; for while he practised cruelties which were sufficient to make the mind shudder with horror, he was fond of those amusing arts that soften and refine the heart. He was particularly addicted, even from childhood, to music, and not totally ignorant of poetry. But chariot-driving was his favourite pursuit. He never missed the circus, when chariot-races were to be exhibited there; appearing at first privately, and soon

303
Causes his
mother to
be murder-
ed.

304
Folly and
meanness of
Nero.

Rome. Soon after publicly; till at last, his passion increasing by indulgence, he was not content with being merely a spectator, but resolved to become one of the principal performers. His governors, however, did all in their power to restrain this perverted ambition; but finding him resolute, they inclosed a space of ground in the valley of the Vatican, where he first exhibited only to some chosen spectators, but shortly after invited the whole town. The praises of his flattering subjects only stimulated him still more to these unbecoming pursuits; so that he now resolved to assume a new character, and to appear as a singer upon the stage.

His passion for music, as was observed, was no less natural to him than the former; but as it was less manly, so he endeavoured to defend it by the example of some of the most celebrated men, who practised it with the same fondness. He had been instructed in the principles of this art from his childhood; and upon his advancement to the empire, he had put himself under the most celebrated masters. He patiently submitted to their instructions, and used all those methods which singers practise, either to mend the voice, or improve its volubility. Yet, notwithstanding all his assiduity, his voice was but a wretched one, being both feeble and unpleasant. However, he was resolved to produce it to the public, such as it was; for flattery, he knew, would supply every deficiency. His first public appearance was at games of his own institution, called *juveniles*; where he advanced upon the stage, tuning his instrument to his voice with great appearance of skill. A group of tribunes and centurions attended behind him; when his old governor Burrhus stood by his hopeful pupil, with indignation in his countenance, and praises on his lips.

He was desirous also of becoming a poet: but he was unwilling to undergo the pain of study, which a proficiency in that art requires; he was desirous of being a poet ready made. For this purpose, he got together several persons, who were considered as great wits at court, though but very little known as such to the public. These attended him with verses which they had composed at home, or which they blabbed out extemporaneously; and the whole of their compositions being tacked together, by his direction, was called a *poem*. Nor was he without his philosophers also; he took a pleasure in hearing their debates after supper, but he heard them merely for his amusement.

Furnished with such talents as these for giving pleasure, he was resolved to make the tour of his empire, and give the most public display of his abilities wherever he came. The place of his first exhibition, upon leaving Rome, was Naples. The crowds there were so great, and the curiosity of the people so earnest in hearing him, that they did not perceive an earthquake that happened while he was singing. His desire of gaining the superiority over the other actors was truly ridiculous: he made interest with his judges, reviled his competitors, formed private factions to support him, all in imitation of those who got their livelihood upon the stage. While he continued to perform, no man was permitted to depart from the theatre, upon any pretence whatsoever. Some were so fatigued with hearing him, that they leaped privately from the walls, or pretended to fall into fainting fits, in order to be

carried out. Nay, it is said, that several women were delivered in the theatre. Soldiers were placed in several parts to observe the looks and gestures of the spectators, either to direct them where to point their applause, or restrain their displeasure. An old senator, named *Vespasian*, afterwards emperor, happening to fall asleep upon one of these occasions, very narrowly escaped with his life.

After being fatigued with the praises of his countrymen, Nero resolved upon going over into Greece, to receive new theatrical honours. The occasion was this. The cities of Greece had made a law to send him the crowns from all the games; and deputies were accordingly dispatched with this (to him) important embassy. As he one day entertained them at his table in the most sumptuous manner, and conversed with them with the utmost familiarity, they intreated to hear him sing. Upon his complying, the artful Greeks testified all the marks of ecstasy and rapture. Applauses so warm were peculiarly pleasing to Nero: he could not refrain from crying out, That the Greeks alone were worthy to hear him; and accordingly prepared without delay to go into Greece, where he spent the whole year ensuing. In this journey, his retinue resembled an army in number; but it was only composed of singers, dancers, taylor, and other attendants upon the theatre. He passed over all Greece, and exhibited at all their games, which he ordered to be celebrated in one year. At the Olympic games he resolved to show the people something extraordinary; wherefore, he drove a chariot with 10 horses; but being unable to sustain the violence of the motion, he was driven from his seat. The spectators, however, gave their unanimous applause, and he was crowned as conqueror. In this manner he obtained the prize at the Isthmian, Pythian, and Nemean games. The Greeks were not sparing of their crowns; he obtained 1800 of them. An unfortunate singer happened to oppose him on one of these occasions, and exerted all the powers of his art, which, it appears, were prodigious. But he seems to have been a better singer than a politician; for Nero ordered him to be killed on the spot. Upon his return from Greece, he entered Naples, through a breach in the walls of the city, as was customary with those who were conquerors in the Olympic games. But all the splendor of his return was reserved for his entry into Rome. There he appeared seated in the chariot of Augustus, dressed in robes of purple, and crowned with wild olive, which was the Olympic garland. He bore in his hand the Pythian crown, and had 1100 more carried before him.— Beside him sat one Diodorus, a musician; and behind him followed a band of singers, as numerous as a legion, who sung in honour of his victories. The senate, the knights, and the people, attended this puerile pageant, filling the air with their acclamations. The whole city was illuminated, every street smoked with incense; wherever he passed, victims were slain; the pavement was strewed with saffron, while garlands of flowers, ribbons, fowls, and pasties, (for so we are told), were showered down upon him from the windows as he passed along. So many honours only inflamed his desires of acquiring new; he at last began to take lessons in wrestling; willing to imitate Hercules in strength, as he had rivalled Apollo in activity. He also caused a lion

Rome.

Rome. lion of pasteboard to be made with great art, against which he undauntedly appeared in the theatre, and struck it down with a blow of his club.

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Burning of
Rome.

But his cruelties even outdid all his other extravagancies, a complete list of which would exceed the limits of the present article. He was often heard to observe, that he had rather be hated than loved. When one happened to say in his presence, "That the world might be burned when he was dead: "Nay," replied Nero, "let it be burnt while I am alive." In fact, a great part of the city of Rome was consumed by fire shortly after. This remarkable conflagration took place in the 11th year of Nero's reign. The fire began among certain shops, in which were kept such goods as were proper to feed it; and spread every way with such amazing rapidity, that its havock was felt in distant streets, before any measures to stop it could be tried. Besides an infinite number of common houses, all the noble monuments of antiquity, all the stately palaces, temples, porticoes, with goods, riches, furniture, and merchandize, to an immense value, were devoured by the flames, which raged first in the low regions of the city, and then mounted to the higher with such terrible violence and impetuosity, as to frustrate all relief. The shrieks of the women, the various efforts of some endeavouring to save the young and tender, of others attempting to assist the aged and infirm, and the hurry of such as strove only to provide for themselves, occasioned a mutual interruption and universal confusion. Many, while they chiefly regarded the danger that pursued them from behind, found themselves suddenly involved in the flames before and on every side. If they escaped into the quarters adjoining, or into the parts quite remote, there too they met with the devouring flames. At last, not knowing whither to fly, nor where to seek sanctuary, they abandoned the city, and repaired to the open fields. Some, out of despair for the loss of their whole substance, others, through tenderness for their children and relations, whom they had not been able to snatch from the flames, suffered themselves to perish in them, though they might easily have found means to escape. No man dared to stop the progress of the fire, there being many who had no other business but to prevent with repeated menaces all attempts of that nature; nay, some were, in the face of the public, seen to throw lighted fire-brands into the houses, loudly declaring that they were authorised so to do; but whether this was only a device to plunder more freely, or in reality they had such orders, was never certainly known.

Nero, who was then at Antium, did not offer to return to the city, till he heard that the flames were advancing to his palace, which, after his arrival, was, in spite of all opposition, burnt down to the ground, with all the houses adjoining to it. However, Nero, affecting compassion for the multitude, thus vagabond and bereft of their dwellings, laid open the field of Mars, and all the great edifices erected there by Agrippa, and even his own gardens. He likewise caused tabernacles to be reared in haste for the reception of the forlorn populace; from Ostia, too, and the neighbouring cities, were brought, by his orders, all sorts of furniture and necessaries, and the price of corn was considerably lessened. But these bounties, however generous and popular, were bestowed in vain, because a report was spread abroad, that, during the time of this gene-

ral conflagration, he mounted his domestic stage, and sung the destruction of Troy, comparing the present desolation to the celebrated calamities of antiquity. At length, on the sixth day, the fury of the flames was stopped at the foot of mount Esquiline, by levelling with the ground an infinite number of buildings; so that the fire found nothing to encounter but the open fields and empty air.

But scarce had the late alarm ceased, when the fire broke out anew with fresh rage, but in places more wide and spacious; whence fewer persons were destroyed, but more temples and public porticoes were overthrown. As this second conflagration broke out in certain buildings belonging to Tigellinus, they were both generally ascribed to Nero; and it was conjectured, that, by destroying the old city, he aimed at the glory of building a new one, and calling it by his name. Of the fourteen quarters into which Rome was divided, four remained entire, three were laid in ashes, and, in the seven others, there remained here and there a few houses, miserably shattered, and half consumed. Among the many ancient and stately edifices, which the rage of the flames utterly consumed, Tacitus reckons the temple dedicated by Servius Tullius to the Moon; the temple and great altar consecrated by Evander to Hercules; the chapel vowed by Romulus to Jupiter Stator; the court of Numa, with the temple of Vesta, and in it the tutelar gods peculiar to the Romans. In the same fate were involved the inestimable treasures acquired by so many victories, the wonderful works of the best painters and sculptors of Greece, and, what is still more to be lamented, the ancient writings of celebrated authors, till then preserved perfectly entire. It was observed, that the fire began the same day on which the Gauls, having formerly taken the city, burnt it to the ground.

Upon the ruins of the demolished city, Nero founded a palace, which he called his *golden house*; though it was not so much admired on account of an immense profusion of gold, precious stones, and other inestimable ornaments, as for its vast extent, containing spacious fields, large wildernesses, artificial lakes, thick woods, orchards, vineyards, hills, groves, &c. The entrance of this stately edifice was wide enough to receive a colossus, representing Nero, 120 feet high: the galleries, which consisted of three rows of tall pillars, were each a full mile in length; the lakes were encompassed with magnificent buildings, in the manner of cities; and the woods stocked with all manner of wild beasts. The house itself was tiled with gold: the walls were covered with the same metal, and richly adorned with precious stones and mother-of-pearl, which in those days was valued above gold: the timber-work and ceilings of the rooms were inlaid with gold and ivory: the roof of one of the banqueting-rooms resembled the firmament both in its figure and motion, turning incessantly about night and day, and showering all sorts of sweet waters. When this magnificent structure was finished, Nero approved of it only so far as to say, that *at length he began to lodge like a man*. Pliny tells us, that this palace extended quite round the city. Nero, it seems, did not finish it; for the first order Otho signed was, as we read in Suetonius, for fifty millions of sesterces to be employed in perfecting the golden palace which Nero had begun.

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Nero's golden
palace.

The

Rome.

307
Undertakes
to cut a
canal from
Avernus to
Tiber.

The projectors of the plan were Severus and Celer, two bold and enterprising men, who soon after put the emperor upon a still more expensive and arduous undertaking, namely, that of cutting a canal through hard rocks and steep mountains, from the lake Avernus to the mouth of the Tiber, 160 miles in length, and of such breadth that two galleys of five ranks of oars might easily pass abreast. His view in this was to open a communication between Rome and Campania, free from the troubles and dangers of the sea; for, this very year, a great number of vessels laden with corn were shipwrecked at Misenum, the pilots choosing rather to venture out in a violent storm, than not to arrive at the time they were expected by Nero. For the executing of this great undertaking, the emperor ordered the prisoners from all parts to be transported into Italy; and such as were convicted, whatever their crimes were, to be condemned only to his works. Nero, who undertook nothing with more ardour and readiness than what was deemed impossible, expended incredible sums in this rash undertaking, and exerted all his might to cut through the mountains adjoining to the lake Avernus; but, not being able to remove by art the obstacles of nature, he was in the end obliged to drop the enterprise.

308
Rome re-
built.

The ground that was not taken up by the foundations of Nero's own palace, he assigned for houses, which were not placed, as after the burning of the city by the Gauls, at random, and without order; but the streets were laid out regularly, spacious and straight; the edifices restrained to a certain height, perhaps of 70 feet, according to the plan of Augustus; the courts were widened; and to all the great houses which stood by themselves, and were called *isles*, large porticoes were added, which Nero engaged to raise at his own expence, and to deliver to each proprietor the squares about them clear from all rubbish. He likewise promised rewards according to every man's rank and substance; and fixed a day for the performance of his promise, on condition that against that day their several houses and palaces were finished. He moreover made the following wise regulations to obviate such a dreadful calamity for the future; to wit, That the new buildings should be raised to a certain height without timber; that they should be arched with stone from the quarries of Gabii and Alba, which were proof against fire; that over the common springs, which were diverted by private men for their own uses, overseers should be placed to prevent that abuse; that every citizen should have ready in his house some machine proper to extinguish the fire; that no wall should be common to two houses, but every house be inclosed within its own peculiar walls, &c. Thus the city in a short time rose out of its ashes with new lustre, and more beautiful than ever. However, some believed, that the ancient form was more conducing to health, the rays of the sun being hardly felt on account of the narrowness of the streets, and the height of the buildings, whereas now there was no shelter against the scorching heat. We are told, that Nero designed to extend the walls to Ostia, and to bring from thence by a canal the sea into the city.

The emperor used every art to throw the odium of this conflagration upon the Christians, who were at that time gaining ground in Rome. Nothing could

be more dreadful than the persecution raised against them upon this false accusation, of which an account is given under the article *Ecclesiastical History*. Hitherto, however, the citizens of Rome seemed comparatively exempted from his cruelties, which chiefly fell upon strangers and his nearest connections; but a conspiracy formed against him by Piso, a man of great power and integrity, which was prematurely discovered, opened a new train of suspicions that destroyed many of the principal families in Rome. This conspiracy, in which several of the chief men of the city were concerned, was first discovered by the indiscreet zeal of a woman named *Epicharis*, who, by some means now unknown, had been let into the plot, which she revealed to *Volusius*, a tribune, in order to prevail upon him to be an accomplice. *Volusius*, instead of coming into her design, went and discovered what he had learned to Nero, who immediately put *Epicharis* in prison. Soon after, a freedman belonging to *Scænius*, one of the accomplices, made a farther discovery. The conspirators were examined apart; and as their testimonies differed, they were put to the torture. *Natalis* was the first who made a confession of his own guilt and that of many others. *Scænius* gave a list of the conspirators still more ample. *Lucan*, the poet, was amongst the number; and he, like the rest, in order to save himself, still farther enlarged the catalogue, naming, among others, *Attilia*, his own mother. *Epicharis* was now, therefore, again called upon and put to the torture; but her fortitude was proof against all the tyrant's cruelty; neither scourging nor burning, nor all the malicious methods used by the executioners, could extort the smallest confession. She was therefore remanded to prison, with orders to have her tortures renewed the day following. In the meantime, she found an opportunity of strangling herself with her handkerchief, by hanging it against the back of her chair. On the discoveries already made, *Piso*, *Lateranus*, *Fenmius Rufus*, *Subrius Flavius*, *Sulpicius Asper*, *Vestinus* the consul, and numberless others, were all executed without mercy. But the two most remarkable personages who fell on this occasion were *Seneca* the philosopher, and *Lucan* the poet, who was his nephew. It is not certainly known whether *Seneca* was really concerned in this conspiracy or not.— This great man had for some time perceived the outrageous conduct of his pupil; and, finding himself incapable of controuling his savage disposition, had retired from court into solitude and privacy. However, his retreat did not now protect him; for Nero, either having real testimony against him, or else hating him for his virtues, sent a tribune to inform him that he was suspected as an accomplice, and soon after sent him an order to put himself to death, with which he complied.

In this manner was the whole city filled with slaughter, and frightful instances of treachery. No master was secure from the vengeance of his slaves, nor even parents from the baser attempts of their children. Not only throughout Rome, but the whole country round, bodies of soldiers were seen in pursuit of the suspected and the guilty. Whole crowds of wretches loaded with chains were led every day to the gates of the palace, to wait their sentence from the tyrant's own lips. He always presided at the torture in person, attended by *Tigellinus*.

Rome.

309
The conspi-
racy of
Piso.

Rome. ¹gellinus, captain of the guard, who, from being the most abandoned man in Rome, was now become his principal minister and favourite.

Nor were the Roman provinces in a better situation than the capital city. The example of the tyrant seemed to influence his governors, who gave instances not only of their rapacity, but of their cruelty, in every part of the empire. In the seventh year of his reign, the Britons revolted, under the conduct of their queen Boadicea* ; but were at last so completely defeated, that ever after, during the continuance of the Romans among them, they lost not only all hopes, but even all desire of freedom.

† See Eng-
land.

310
Success
against the
Parthians,
&c.

A war also was carried on against the Parthians for the greatest part of this reign, conducted by Corbulo ; who, after many successes, had dispossessed Tiridates, and settled Tigranes in Armenia in his room. Tiridates, however, was soon after restored by an invasion of the Parthians into that country ; but being once more opposed by Corbulo, the Romans and Parthians came to an agreement, that Tiridates should continue to govern Armenia, upon condition that he should lay down his crown at the feet of the emperor's statue, and receive it as coming from him ; all which he shortly after performed. A ceremony, however, which Nero desired to have repeated to his person ; wherefore by letters and promises he invited Tiridates to Rome, granting him the most magnificent supplies for his journey. Nero attended his arrival with very sumptuous preparations. He received him seated on a throne, accompanied by the senate standing round him, and the whole army drawn out with all imaginable splendor. — Tiridates ascended the throne with great reverence ; and approaching the emperor fell down at his feet, and in the most abject terms acknowledged himself his slave. Nero raised him up, telling him with equal arrogance, that he did well, and that by his submission he had gained a kingdom which his ancestors could never acquire by their arms. He then placed the crown on his head, and, after the most costly ceremonies and entertainments, he was sent back to Armenia, with incredible sums of money to defray the expences of his return.

311
Revolt of
the Jews.

In the 12th year of this emperor's reign, the Jews also revolted, having been severely oppressed by the Roman governor. It is said that Florus, in particular, was arrived at that degree of tyranny, that by public proclamation he gave permission to plunder the country, provided he received half the spoil. These oppressions drew such a train of calamities after them, that the sufferings of all other nations were slight in comparison to what this devoted people afterwards endured, as is related under the article Jews. In the mean time, Nero proceeded in his cruelties at Rome with unabated severity.

The valiant Corbulo, who had gained so many victories over the Parthians, could not escape his fury. Nor did the empress Poppæa herself escape ; whom, in a fit of anger, he kicked when she was pregnant, by which she miscarried and died. At last the Romans began to grow weary of such a monster, and there appeared a general revolution in all the provinces.

312
Revolt of
Vindex in
Gaul.

The first appeared in Gaul, under Julius Vindex, who commanded the legions there, and publicly protested against the tyrannical government of Nero. He appeared to have no other motive for this revolt than that

of freeing the world from an oppressor ; for when it was told him that Nero had set a reward upon his head of 10,000,000 of sesterces, he made this gallant answer, "Whoever brings me Nero's head, shall, if he pleases, have mine." But still more to show that he was not actuated by motives of private ambition, he proclaimed Sergius Galba emperor, and invited him to join in the revolt. Galba, who was at that time governor of Spain, was equally remarkable for his wisdom in peace and his courage in war. But as all talents under corrupt princes are dangerous, he for some years had seemed willing to court obscurity, giving himself up to an inactive life, and avoiding all opportunities of signalizing his valour. He now therefore, either through the caution attending old age, or from a total want of ambition, appeared little inclined to join with Vindex, and continued for some time to deliberate with his friends on the part he should take.

In the mean time, Nero, who had been apprised of the proceedings against him in Gaul, appeared totally regardless of the danger, privately flattering himself that the suppression of this revolt would give him an opportunity of fresh confiscations. But the actual revolt of Galba, the news of which arrived soon after, affected him in a very different manner. The reputation of that general was such, that from the moment he declared against him, Nero considered himself as undone. He received the account as he was at supper ; and instantly, struck with terror, overturned the table with his foot, breaking two crystal vases of immense value. He then fell into a swoon ; from which when he recovered he tore his clothes, and struck his head, crying out, "that he was utterly undone." He then began to meditate slaughters more extensive than he yet had committed. He resolved to massacre all the governors of provinces, to destroy all exiles, and to murder all the Gauls in Rome, as a punishment for the treachery of their countrymen. In short, in the wildness of his rage, he thought of poisoning the whole senate, of burning the city, and turning the lions kept for the purposes of the theatre out upon the people. These designs being impracticable, he resolved at last to face the danger in person. But his very preparations served to mark the insatiation of his mind. His principal care was, to provide waggons for the convenient carriage of his musical instruments ; and to dress out his concubines like Amazons, with whom he intended to face the enemy. He also made a resolution, that if he came off with safety and empire, he would appear again upon the theatre with the lute, and would equip himself as a pantomime.

While Nero was thus frivolously employed, the revolt became general. Not only the armies in Spain and Gaul, but also the legions in Germany, Africa, and Lusitania, declared against him. Virginus Rufus alone, who commanded an army on the Upper Rhine, for a while continued in suspense ; during which his forces, without his permission, falling upon the Gauls, routed them with great slaughter, and Vindex slew himself. But this ill success no way advanced the interests of Nero ; he was so detested by the whole empire, that he could find none of the armies faithful to him, however they might disagree with each other. He therefore called for Locusta to furnish him with poison ; and, thus prepared for the worst, he retired to the Servilian gar-

Rome.

313
And of
Galba.

314
Miserable
situation of
Nero.
dens,

Rome. dens, with a resolution of flying into Egypt. He accordingly dispatched the freedmen, in which he had the most confidence, to prepare a fleet at Ostia; and in the meanwhile sounded, in person, the tribunes and centurions of the guard, to know if they were willing to share his fortunes. But they all excused themselves, under divers pretexts. One of them had the boldness to answer him by part of a line from Virgil: *Usque adeone miserum est mori?* "Is death then such a misfortune?" Thus destitute of every resource, all the expedients that cowardice, revenge, or terror could produce, took place in his mind by turns. He at one time resolved to take refuge among the Parthians; at another, to deliver himself up to the mercy of the insurgents: one while, he determined to mount the rostrum, to ask pardon for what was past, and to conclude with promises of amendment for the future. With these gloomy deliberations he went to bed; but waking about midnight, he was surprised to find his guards had left him. The prætorian soldiers, in fact, having been corrupted by their commander, had retired to their camp, and proclaimed Galba emperor. Nero immediately sent for his friends to deliberate upon his present exigence; but his friends also forsook him. He went in person from house to house; but all the doors were shut against him, and none were found to answer his inquiries. While he was pursuing this inquiry, his very domestics followed the general defection; and having plundered his apartment, escaped different ways. Being now reduced to desperation, he desired that one of his favourite gladiators might come and dispatch him: but even in this request there was none found to obey. "Alas! (cried he) have I neither friend nor enemy?" And then running desperately forth, he seemed resolved to plunge headlong into the Tiber. But just then his courage beginning to fail him, he made a sudden stop, as if willing to recollect his reason; and asked for some secret place, where he might re-assume his courage, and meet death with becoming fortitude. In this distress, Phaon, one of his freedmen, offered him his country-house, at about four miles distant, where he might for some time remain concealed. Nero accepted his offer; and, half-dressed as he was, with his head covered, and hiding his face with an handkerchief, he mounted on horseback, attended by four of his domestics, of whom the wretched Sporus was one. His journey, though quite short, was crowded with adventures. Round him he heard nothing but confused noises from the camp, and the cries of the soldiers, imprecating a thousand evils upon his head. A passenger, meeting him on the way, cried, "There go men in pursuit of Nero." Another asked him, if there was any news of Nero in the city? His horse taking fright at a dead body that lay near the road, he dropped his handkerchief; and a soldier that was near, addressed him by name. He now therefore quitted his horse, and forsaking the highway, entered a thicket that led towards the back part of Phaon's house, through which he crept, making the best of his way among the reeds and brambles, with which the place was overgrown. When he was arrived at the back part of the house, while he was waiting till there should be a breach made in the wall, he took up some water in the hollow of his hands from a pool to drink; saying, "To this liquor is Nero reduced." When the hole was made large enough to admit him, he crept in upon

all-fours, and took a short repose upon a wretched pallet, that had been prepared for his reception. Being pressed by hunger, he demanded somewhat to eat: they brought him a piece of brown bread, which he refused; but he drank a little water. During this interval, the senate finding the prætorian guards had taken part with Galba, declared him emperor, and condemned Nero to die *more majorum*; that is, "according to the rigour of the ancient laws." These dreadful tidings were quickly brought by one of Phaon's slaves from the city, while Nero yet continued lingering between his hopes and his fears. When he was told of the resolution of the senate against him, he asked the messenger what he meant by being punished "according to the rigour of the ancient laws?" To this he was answered, that the criminal was to be stripped naked, his head was to be fixed in a pillory, and in that posture he was to be scourged to death. Nero was so terrified at this, that he seized two poniards which he had brought with him, and examining their points, returned them to their sheaths, saying, that the fatal moment was not yet arrived. However, he had little time to spare; for the soldiers who had been sent in pursuit of him were just then approaching the house: wherefore hearing the sound of the horse's feet, he set a dagger to his throat, with which, by the assistance of Epaphroditus, his freedman and secretary, he gave himself a mortal wound. He was not quite dead when one of the cen-

Rome.

315 His death.

Galba was 72 years old when he was declared emperor, and was then in Spain with his legions. However, he soon found that his being raised to the throne was but an inlet to new disquietudes. His first embarrassment arose from a disorder in his own army; for upon his approaching the camp, one of the wings of horse repenting of their choice, prepared to revolt, and he found it no easy matter to reconcile them to their duty. He also narrowly escaped assassination from some slaves, who were presented to him by one of Nero's freedmen with that intent. The death of Vindex also served to add not a little to his disquietudes; so that, upon his very entrance into the empire, he had some thoughts of putting an end to his own life. But hearing from Rome that Nero was dead, and the empire transferred to him, he immediately assumed the title and ensigns of command. In his journey towards Rome he was met by Rufus Virginius, who, finding the senate had decreed him the government, came to yield him obedience. This general had more than once refused the empire himself, which was offered him by his soldiers; alleging, that the senate alone had the disposal of it, and from them only he would accept the honour.

316 Uneasiness of Galba in the beginning of his reign.

Galba having been brought to the empire by means of his army, was at the same time willing to suppress their power to commit any future disturbance. His first approach to Rome was attended with one of those rigorous strokes of justice which ought rather to be denominated *cruelty* than any thing else. A body of mariners,

317 Faults in his administration.

Rome.

riners, whom Nero had taken from the oar and enlisted among the legions, went to meet Galba, three miles from the city, and with loud importunities demanded a confirmation of what his predecessor had done in their favour. Galba, who was rigidly attached to the ancient discipline, deferred their request to another time. But they, considering this delay as equivalent to an absolute denial, insisted in a very disrespectful manner; and some of them even had recourse to arms: whereupon Galba ordered a body of horse attending him to ride in among them, and thus killed 7000 of them; but not content with this punishment, he afterwards ordered them to be decimated. Their insolence demanded correction; but such extensive punishments deviated into cruelty. His next step to curb the insolence of the soldiers, was his discharging the German cohort, which had been established by the former emperors as a guard to their persons. Those he sent home to their own country unrewarded, pretending they were disaffected to his person. He seemed to have two other objects also in view; namely, to punish those vices which had come to an enormous height in the last reign, with the strictest severity; and to replenish the exchequer, which had been quite drained by the prodigality of his predecessors. But these attempts only brought on him the imputation of severity and avarice; for the state was too much corrupted to admit of such an immediate transition from vice to virtue. The people had long been maintained in sloth and luxury by the prodigality of the former emperors, and could not think of being obliged to seek for new means of subsistence, and to retrench their superfluities. They began, therefore, to satirize the old man, and turn the simplicity of his manners into ridicule. Among the marks of avarice recorded of him, he is said to have groaned upon having an expensive soup served up to his table; he is said to have presented to his steward, for his fidelity, a plate of beans; a famous player upon the flute, named *Canus*, having greatly delighted him, it is reported, that he drew out his purse, and gave him five-pence, telling him, that it was private and not public money. By such ill-judged frugalities, at such a time, Galba began to lose his popularity; and he, who before his accession was esteemed by all, being become emperor, was considered with ridicule and contempt. But there are some circumstances alleged against him, less equivocal than those trifling ones already mentioned. Shortly after his coming to Rome, the people were presented with a most grateful spectacle, which was that of *Locusta*, *Elius*, *Policletus*, *Petronius*, and *Petinus*, all the bloody ministers of Nero's cruelty, drawn in fetters through the city, and publicly executed. But *Tigellinus*, who had been more active than all the rest, was not there. The crafty villain had taken care for his own safety, by the largeness of his bribes; and though the people cried out for vengeance against him at the theatre and at the circus, yet the emperor granted him his life and pardon. *Helotus* the eunuch, also, who had been the instrument of poisoning *Claudius*, escaped, and owed his safety to the proper application of his wealth. Thus, by the inequality of his conduct, he became despicable to his subjects. At one time shewing himself severe and frugal, at another remiss and prodigal; condemning some illustrious persons without any hearing, and pardoning others though guilty: in short, nothing was done but

by the mediation of his favourites; all offices were venal, and all punishments redeemable by money.

Affairs were in this unsettled posture at Rome, when the provinces were yet in a worse condition. The success of the army in Spain in choosing an emperor induced the legions in the other parts to wish for a similar opportunity. Accordingly, many seditions were kindled, and several factions promoted in different parts of the empire, but particularly in Germany. There were then in that province two Roman armies; the one which had lately attempted to make *Rufus Virginius* emperor, as has been already mentioned, and which was commanded by his lieutenant; the other commanded by *Vitellius*, who long had an ambition to obtain the empire for himself. The former of these armies despising their present general, and considering themselves as suspected by the emperor for having been the last to acknowledge his title, resolved now to be foremost in denying it. Accordingly, when they were summoned to take the oaths of homage and fidelity, they refused to acknowledge any other commands but those of the senate. This refusal they backed by a message of the prætorian bands, importing, that they were resolved not to acquiesce in the election of an emperor created in Spain, and desiring that the senate should proceed to a new choice.

Galba being informed of this commotion, was sensible, that, besides his age, he was less respected for want of an heir. He resolved therefore to put what he had formerly designed in execution, and to adopt some person whose virtues might deserve such advancement, and protect his declining age from danger. His favourites understanding his determination, instantly resolved to give him an heir of their own choosing; so that there arose a great contention among them upon this occasion. *Otho* made warm application for himself; alleging the great services he had done the emperor, as being the first man of note who came to his assistance when he had declared against *Nero*. However, Galba, being fully resolved to consult the public good alone, rejected his suit; and on a day appointed ordered *Piso Lucinianus* to attend him. The character given by historians of *Piso* is, that he was every way worthy of the honour designed him. He was noway related to Galba; and had no other interest but merit to recommend him to his favour. Taking this youth therefore by the hand, in the presence of his friends, he adopted him to succeed in the empire, giving him the most wholesome lessons for guiding his future conduct. *Piso's* conduct showed that he was highly deserving this distinction: in all his deportment there appeared such modesty, firmness, and equality of mind, as bespoke him rather capable of discharging, than ambitious of obtaining, his present dignity. But the army and the senate did not seem equally disinterested upon this occasion; they had been so long used to bribery and corruption, that they could now bear no emperor who was not in a capacity of satisfying their avarice. The adoption therefore of *Piso* was but coldly received; for his virtues were no recommendation in a nation of universal depravity.

Otho now finding his hopes of adoption wholly frustrated, and still further stimulated by the immense load of debt which he had contracted by his riotous way of living, resolved upon obtaining the empire by force, since

318
Otho declared emperor.

Rome. since he could not by peaceable succession. In fact, his circumstances were so very desperate, that he was heard to say, that it was equal to him whether he fell by his enemies in the field or by his creditors in the city. He therefore raised a moderate sum of money, by selling his interest to a person who wanted a place; and with this bribed two subaltern officers in the prætorian bands, supplying the deficiency of largesses by promises and plausible pretences. Having in this manner, in less than eight days, corrupted the fidelity of the soldiers, he stole secretly from the emperor while he was sacrificing; and assembling the soldiers, in a short speech urged the cruelties and avarice of Galba. Finding these his invectives received with universal shouts by the whole army, he entirely threw off the mask, and avowed his intentions of dethroning him. The soldiers being ripe for sedition, immediately seconded his views: taking Otho upon their shoulders, they instantly proclaimed him emperor; and, to strike the citizens with terror, carried him with their swords drawn into the camp.

319 Galba murdered. Galba, in the mean time, being informed of the revolt of the army, seemed utterly confounded, and in want of sufficient resolution to face an event which he should have long foreseen. In this manner the poor old man continued wavering and doubtful; till at last, being deluded by a false report of Otho's being slain, he rode into the forum in complete armour, attended by many of his followers. Just at the same instant a body of horse sent from the camp to destroy him entered on the opposite side, and each party prepared for the encounter. For some time hostilities were suspended on each side; Galba, confused and irresolute, and his antagonists struck with horror at the baseness of their enterprise. At length, however, finding the emperor in some measure deserted by his adherents, they rushed in upon him, trampling under foot the crowds of people that then filled the forum. Galba seeing them approach, seemed to recollect all his former fortitude; and bending his head forward, bid the assassins strike it off if it were for the good of the people. This was quickly performed; and his head being set upon the point of a lance, was presented to Otho, who ordered it to be contemptuously carried round the camp; his body remaining exposed in the streets till it was buried by one of his slaves. He died in the 73d year of his age, after a short reign of seven months.

No sooner was Galba thus murdered, than the senate and people ran in crowds to the camp, contending who should be foremost in extolling the virtues of the new emperor, and depressing the character of him they had so unjustly destroyed. Each laboured to excel the rest in his instances of homage; and the less his affections were for him, the more did he indulge all the vehemence of exaggerated praise. Otho finding himself surrounded by congratulating multitudes, immediately repaired to the senate, where he received the titles usually given to the emperors; and from thence returned to the palace, seemingly resolved to reform his life, and assume manners becoming the greatness of his station.

He began his reign by a signal instance of clemency, in pardoning Marius Celsus, who had been highly favoured by Galba; and not contented with barely forgiving, he advanced him to the highest honours; as-

serting, that "fidelity deserved every reward." This act of clemency was followed by another of justice, equally agreeable to the people. Tigellinus, Nero's favourite, he who had been the promoter of all his cruelties, was now put to death; and all such as had been unjustly banished, or stripped, at his instigation, during Nero's reign, were restored to their country and fortunes.

In the mean time, the legions in Lower Germany ³²⁰ *Vitellius* having been purchased by the large gifts and specious promises of Vitellius their general, were at length induced to proclaim him emperor; and regardless of the senate, declared that they had an equal right to appoint to that high station with the cohorts at Rome. The news of this conduct in the army soon spread consternation throughout Rome; but Otho was particularly struck with the account, as being apprehensive that nothing but the blood of his countrymen could decide a contest of which his own ambition only was the cause. He now therefore sought to come to an agreement with Vitellius; but this not succeeding, both sides began their preparations for war. News being received that Vitellius was upon his march to Italy, Otho departed from Rome with a vast army to oppose him. But though he was very powerful with regard to numbers, his men, being little used to war, could not be relied on. He seemed by his behaviour sensible of the disproportion of his forces; and he is said to have been tortured with frightful dreams and the most uneasy apprehensions. It is also reported by some, that one night fetching many profound sighs in his sleep, his servants ran hastily to his bed-side, and found him stretched on the ground. He alleged he had seen the ghost of Galba, which had, in a threatening manner, beat and pushed him from the bed; and he afterwards used many expiations to appease it. However this be, he proceeded with a great show of courage till he arrived at the city of Brixellum, on the river Po, where he remained, sending his forces before him under the conduct of his generals Suetonius and Celsus, who made what haste they could to give the enemy battle. The army of Vitellius, which consisted of 70,000 men, was commanded by his generals Valens and Cecina, he himself remaining in Gaul in order to bring up the rest of his forces. Thus both sides hastened to meet each other with so much animosity and precipitation, that three considerable battles were fought in the space of three days. One near Placentia, another near Cremona, and a third at a place called *Castor*; in all which Otho had the advantage. But these successes were but of short-lived continuance; for Valens and Cecina, who had hitherto acted separately, joining their forces, and reinforcing their armies with fresh supplies, resolved to come to a general engagement. Otho, who by this time had joined his army ³²¹ *Otho de-* at a little village called *Bedriacum*, finding the enemy, ^{feated at} *Bedriacum* notwithstanding their late losses, inclined to come to a battle, resolved to call a council of war to determine upon the proper measures to be taken. His generals were of opinion to protract the war: but others, whose inexperience had given them confidence, declared, that nothing but a battle could relieve the miseries of the state; protesting, that Fortune, and all the gods, with the divinity of the emperor himself, favoured the design, and would undoubtedly prosper the enterprise.

Rome.

In this advice Otho acquiesced: he had been for some time so uneasy under the war, that he seemed willing to exchange suspense for danger. However, he was so surrounded with flatterers, that he was prohibited from being personally present in the engagement, but prevailed upon to reserve himself for the fortune of the empire, and wait the event at Brixellum. The affairs of both armies being thus adjusted, they came to an engagement at Bedriacum; where, in the beginning, those on the side of Otho seemed to have the advantage. At length, the superior discipline of the legions of Vitellius turned the scale of victory. Otho's army fled in great confusion towards Bedriacum, being pursued with a miserable slaughter all the way.

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Despairs,
and kills
himself.

In the mean time, Otho waited for the news of the battle with great impatience, and seemed to tax his messengers with delay. The first account of his defeat was brought him by a common soldier, who had escaped from the field of battle. However, Otho, who was still surrounded by flatterers, was desired to give no credit to a base fugitive, who was guilty of falsehood only to cover his own cowardice. The soldier, however, still persisted in the veracity of his report; and, finding none inclined to believe him, immediately fell upon his sword, and expired at the emperor's feet. Otho was so much struck with the death of this man, that he cried out, that he would cause the ruin of no more such valiant and worthy soldiers, but would end the contest the shortest way; and therefore having exhorted his followers to submit to Vitellius, he put an end to his own life.

It was no sooner known that Otho had killed himself, than all the soldiers repaired to Virginus, the commander of the German legions, earnestly intreating him to take upon him the reins of government; or at least, intreating his mediation with the generals of Vitellius in their favour. Upon his declining their request, Rubrius Gallus, a person of considerable note, undertook their embassy to the generals of the conquering army; and soon after obtained a pardon for all the adherents of Otho.

325
Vitellius
declared
emperor.

Vitellius was immediately after declared emperor by the senate; and received the marks of distinction which were now accustomed to follow the appointment of the strongest side. At the same time, Italy was severely distressed by the soldiers, who committed such outrages as exceeded all the oppressions of the most calamitous war. Vitellius, who was yet in Gaul, resolved, before he set out for Rome, to punish the prætorian cohorts, who had been the instruments of all the late disturbances in the state. He therefore caused them to be disarmed, and deprived of the name and honour of soldiers. He also ordered 150 of those who were most guilty to be put to death.

As he approached towards Rome, he passed through the towns with all imaginable splendor; his passage by water was in painted galleys, adorned with garlands of flowers, and profusely furnished with the greatest delicacies. In his journey there was neither order nor discipline among his soldiers; they plundered wherever they came with impunity; and he seemed no way displeased with the licentiousness of their behaviour.

Upon his arrival at Rome, he entered the city, not as a place he came to govern with justice, but as a town that became his own by the laws of conquest. He

marched through the streets mounted on horseback, all in armour; the senate and people going before him, as if the captives of his late victory. He the next day made the senate a speech, in which he magnified his own actions, and promised them extraordinary advantages from his administration. He then harangued the people, who, being now long accustomed to flatter all in authority, highly applauded and blessed their new emperor.

In the mean time, his soldiers being permitted to satisfy themselves in the debaucheries of the city, grew totally unfit for war. The principal affairs of the state were managed by the lowest wretches. Vitellius, more abandoned than they, gave himself up to all kinds of luxury and profuseness: but gluttony was his favourite vice, so that he brought himself to a habit of vomiting, in order to renew his meals at pleasure. His entertainments, though seldom at his own cost, were prodigiously expensive; he frequently invited himself to the tables of his subjects, breakfasting with one, dining with another, and supping with a third, all in the same day. The most memorable of these entertainments was that made for him by his brother on his arrival at Rome. In this were served up 2000 several dishes of fish, and 7000 of fowl, of the most valuable kinds. But in one particular dish he seemed to have outdone all the former profusion of the most luxurious Romans. This dish, which was of such magnitude as to be called the *shield of Minerva*, was filled with an olio made from the sounds of the fish called *scarri*, the brains of pheasants and woodcocks, the tongues of the most costly birds, and the spawn of lampreys brought from the Carpathian sea. In order to cook this dish properly, a furnace was built in the fields, as it was too large for any kitchen to contain it.

In this manner did Vitellius proceed; so that Josephus tells us, if he had reigned long, the whole empire would not have been sufficient to have maintained his gluttony. All the attendants of his court sought to raise themselves, not by their virtues and abilities, but the sumptuousness of their entertainments. This prodigality produced its attendant, want; and that, in turn, gave rise to cruelty.

Those who had formerly been his associates were now destroyed without mercy. Going to visit one of them in a violent fever, he mingled poison with his water, and delivered it to him with his own hands. He never pardoned those money-lenders who came to demand payment of his former debts. One of the number coming to salute him, he immediately ordered him to be carried off to execution; but shortly after, commanding him to be brought back, when all his attendants thought it was to pardon the unhappy creditor, Vitellius gave them soon to understand that it was merely to have the pleasure of feeding his eyes with his torments. Having condemned another to death, he executed his two sons with him, only for their presuming to intercede for their father. A Roman knight being dragged away to execution, and crying out that he had made the emperor his heir, Vitellius demanded to see the will, where finding himself joint heir with another, he ordered both to be executed, that he might enjoy the legacy without a partner.

By the continuance of such vices and cruelties as these he became odious to all mankind, and the astrologers

Rome.

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His shame.
ful glut-
tony, and
other vices.

³²⁷ **Rome.** logers began to prognosticate his ruin. A writing was set up in the forum to this effect: "We, in the name of the ancient Chaldeans, give Vitellius warning to depart this life by the kalends of October." Vitellius, on his part, received this information with terror, and ordered all the astrologers to be banished from Rome. An old woman having foretold, that if he survived his mother, he should reign many years in happiness and security, this gave him a desire of putting her to death; which he did, by refusing her sustenance, under the pretence of its being prejudicial to her health. But he soon saw the futility of relying upon such vain prognostications; for his soldiers, by their cruelty and rapine, having become insupportable to the inhabitants of Rome, the legions of the East, who had at first acquiesced in his dominion, began to revolt, and shortly after unanimously resolved to make Vespasian emperor.

³²⁷
Vespasian
proclaimed
emperor.

Vespasian, who was appointed commander against the rebellious Jews, had reduced most of their country, except Jerusalem, to subjection. The death of Nero, however, had at first interrupted the progress of his arms, and the succession of Galba gave a temporary check to his conquests, as he was obliged to send his son Titus to Rome, to receive that emperor's commands. Titus, however, was so long detained by contrary winds, that he received news of Galba's death before he set sail. He then resolved to continue neuter during the civil wars between Otho and Vitellius; and when the latter prevailed, he gave him his homage with reluctance. But being desirous of acquiring reputation, though he disliked the government, he determined to lay siege to Jerusalem, and actually made preparations for that great undertaking, when he was given to understand that Vitellius was detested by all ranks in the empire. These murmurings increased every day, while Vespasian secretly endeavoured to advance the discontents of the army. By these means they began at length to fix their eyes upon him as the person the most capable and willing to terminate the miseries of his country, and put a period to the injuries it suffered. Not only the legions under his command, but those in Mæsia and Pannonia, came to the same resolution, so that they declared themselves for Vespasian. He was also without his own consent proclaimed emperor at Alexandria, the army there confirming it with extraordinary applause, and paying their accustomed homage. Still, however, Vespasian seemed to decline the honour done him; till at length his soldiers compelled him, with their threats of immediate death, to accept a title which, in all probability, he wished to enjoy. He now, therefore, called a council of war: where it was resolved, that his son Titus should carry on the war against the Jews; and that Mutianus, one of his generals, should, with the greatest part of his legions, enter Italy; while Vespasian himself should levy forces in all parts of the east, in order to reinforce them in case of necessity.

During these preparations, Vitellius, though buried in sloth and luxury, was resolved to make an effort to defend the empire; wherefore his chief commanders, Valens and Cecina, were ordered to make all possible preparations to resist the invaders. The first army that entered Italy with an hostile intention was under the command of Antonius Primus, who was met by Ce-

cina near Cremona. A battle was expected to ensue; but a negotiation taking place, Cecina was prevailed upon to change sides, and declare for Vespasian. His army, however, quickly repented of what they had done; and imprisoning their general, attacked Antonius, though without a leader. The engagement continued during the whole night: in the morning, after a short repast, both armies engaged a second time; when the soldiers of Antonius saluting the rising sun, according to custom, the Vitellians supposing that they had received new reinforcements, betook themselves to flight, with the loss of 30,000 men. Shortly after, freeing their general Cecina from prison, they prevailed upon him to intercede with the conquerors for pardon; which they obtained, though not without the most horrid barbarities committed upon Cremona, the city to which they had retired for shelter.

Rome.

³²⁸
Vitellius
defeated.

When Vitellius was informed of the defeat of his army, his former insolence was converted into an extreme of timidity and irresolution. At length he commanded Julius Priscus and Alphenus Varus, with some forces that were in readiness, to guard the passes of the Apennines, to prevent the enemy's march to Rome; reserving the principal body of his army to secure the city, under the command of his brother Lucius. But being persuaded to repair to his army in person, his presence only served to increase the contempt of his soldiers. He there appeared irresolute, and still luxurious, without counsel or conduct, ignorant of war, and demanding from others those instructions which it was his duty to give. After a short continuance in the camp, and understanding the revolt of his fleet, he returned once more to Rome: but every day only served to render his affairs still more desperate; till at last he made offers to Vespasian of resigning the empire, provided his life were granted, and a sufficient revenue for his support. In order to enforce his request, he issued from his palace in deep mourning, with all his domestics weeping round him. He then went to offer the sword of justice to Cecilius, the consul; which he refusing, the abject emperor prepared to lay down the ensigns of the empire in the temple of Concord. But being interrupted by some, who cried out, That he himself was Concord, he resolved, upon so weak an encouragement, still to maintain his power, and immediately prepared for his defence.

During this fluctuation of counsels, one Sabinus, who had advised Vitellius to resign, perceiving his desperate situation, resolved, by a bold step, to oblige Vespasian, and accordingly seized upon the Capitol. ³²⁹ But he was premature in his attempt; for the soldiers of Vitellius attacked him with great fury, and, prevailing by their numbers, soon laid that beautiful building in ashes. During this dreadful conflagration, Vitellius was feasting in the palace of Tiberius, and beholding all the horrors of the assault with great satisfaction. Sabinus was taken prisoner, and shortly after executed by the emperor's command. Young Domitian, his nephew, who was afterwards emperor, escaped by flight, in the habit of a priest; and all the rest who survived the fire were put to the sword. But this success served little to improve the affairs of Vitellius. He vainly sent messenger after messenger to bring Vespasian's general, Antonius, to a composition.

This

Rome.
330
Dreadful
situation
of Rome.

This commander gave no answer to his requests, but still continued his march towards Rome. Being arrived before the walls of the city, the forces of Vitellius were resolved upon defending it to the utmost extremity. It was attacked on three sides with the utmost fury; while the army within, sallying upon the besiegers, defended it with equal obstinacy. The battle lasted a whole day, till at last the besieged were driven into the city, and a dreadful slaughter made of them in all the streets, which they vainly attempted to defend. In the mean time, the citizens stood by, looking on as both sides fought; and, as if they had been in a theatre, clapped their hands; at one time encouraging one party, and again the other. As either turned their backs, the citizens would then fall upon them in their places of refuge, and so kill and plunder them without mercy. But what was still more remarkable, during these dreadful slaughters both within and without the city, the people would not be prevented from celebrating one of their riotous feasts, called the *Saturnalia*; so that at one time might have been seen a strange mixture of mirth and misery, of cruelty and lewdness; in one place, burials and slaughters; in another, drunkenness and feasting; in a word, all the horrors of a civil war, and all the licentiousness of the most abandoned security!

During this complicated scene of misery, Vitellius retired privately to his wife's house, upon mount Aventine, designing that night to fly to the army commanded by his brother at Tarracina. But, quite incapable, through fear, of forming any resolution, he changed his mind, and returned again to his palace, now void and desolate; all his slaves forsaking him in his distress, and purposely avoiding his presence. There, after wandering for some time quite disconsolate, and fearing the face of every creature he met, he hid himself in an obscure corner, from whence he was soon taken by a party of the conquering soldiers. Still, however, willing to add a few hours more to his miserable life, he begged to be kept in prison till the arrival of Vespasian at Rome, pretending that he had secrets of importance to discover. But his intreaties were vain; the soldiers binding his hands behind him, and throwing an halter round his neck, led him along, half naked, into the public forum, upbraiding him, as they proceeded, with all those bitter reproaches their malice could suggest, or his own cruelties deserve. They also tied his hair backwards, as was usual with the most infamous malefactors, and held the point of a sword under his chin, to prevent his hiding his face from the public. Some cast dirt and filth upon him as he passed, others struck him with their hands; some ridiculed the defects of his person, his red fiery face, and the enormous greatness of his belly. At length, being come to the place of punishment, they killed him with many blows; and then dragging the dead body through the streets with an hook, they threw it, with all possible ignominy, into the river Tiber. Such was the miserable end of this emperor, in the 57th year of his age, after a short reign of eight months and five days.

331
Dreadful
cruelties
practised
by the sol-
diers.

Vitellius being dead, the conquering army pursued their enemies throughout the city, while neither houses nor temples afforded refuge to the fugitives. The streets and public places were all strewed with dead, each man lying slain where it was his misfortune to be

overtaken by his unmerciful pursuers. But not only the enemy suffered in this manner, but many of the citizens, who were obnoxious to the soldiers, were dragged from their houses, and killed without any form of trial. The heat of their resentment being somewhat abated, they next began to seek for plunder; and under pretence of searching for the enemy, left no place without marks of their rage or rapacity. Besides the soldiers, the lower rabble joined in these detestable outrages; some slaves came and discovered the riches of their masters; some were detected by their nearest friends; the whole city was filled with outcry and lamentation; insomuch, that the former ravages of Otho and Vitellius were now considered as slight evils in comparison.

At length, however, upon the arrival of Mutianus, general to Vespasian, these slaughters ceased, and the state began to wear the appearance of former tranquillity. Vespasian was declared emperor by the unanimous consent both of the senate and the army; and dignified with all those titles, which now followed rather the power than the merit of those who were appointed to govern. Messengers were dispatched to him into Egypt, desiring his return, and testifying the utmost desire for his government. However, the winter being dangerous for sailing, he deferred his voyage to a more convenient season. Perhaps, also, the dissensions in other parts of the empire retarded his return to Rome; for one Claudius Civilis, in Lower Ger-

Rome.

332
Vespasian
proclaimed
emperor of
Rome.

333
Revolt of
Claudius
Civilis.

During the time of these commotions in Germany, the Sarmatians, a barbarous nation in the north-east of the empire, suddenly passed the river Iser, and marched into the Roman dominions with such celerity and fury, as to destroy several garrisons, and an army under the command of Fonteius Agrippa. However, they were driven back by Rubrius Gallus, Vespasian's lieutenant, into their native forests; where several attempts were made to confine them by garrisons and forts, placed along the confines of their country. But these hardy nations, having once found the way into the empire, never

334
Irruption
of the Sar-
matians.

Rome. never after desisted from invading it upon every opportunity, till at length they over-ran and destroyed it entirely.

335
Titus sent
against Je-
rusalem.

Vespasian continued some months at Alexandria in Egypt, where it is said he cured a blind and a lame man by touching them. Before he set out for Rome, he gave his son Titus the command of the army that was to lay siege to Jerusalem; while he himself went forward, and was met many miles from Rome by all the senate, and near half the inhabitants, who gave the sincerest testimonies of their joy, in having an emperor of such great and experienced virtues. Nor did he in the least disappoint their expectations; being equally assiduous in rewarding merit, and pardoning his adversaries; in reforming the manners of the citizens, and setting them the best example in his own.

In the mean time, Titus carried on the war against the Jews with vigour, which ended in the terrible destruction of the city, mentioned under the article JEWS. After which his soldiers would have crowned Titus as conqueror; but he refused the honour, alleging that he was only an instrument in the hand of Heaven, that manifestly declared its wrath against the Jews. At Rome, however, all mouths were filled with the praises of the conqueror, who had not only showed himself an excellent general, but a courageous combatant: his return, therefore, in triumph, which he did with his father, was marked with all the magnificence and joy that was in the power of men to express. All things that were esteemed valuable or beautiful among men were brought to adorn this great occasion. Among the rich spoils were exposed vast quantities of gold taken out of the temple; but the book of their law was not the least remarkable amongst the magnificent profusion. A triumphal arch was erected upon this occasion, on which were described all the victories of Titus over the Jews, which remains almost entire to this very day. Vespasian likewise built a temple to Peace, wherein were deposited most of the Jewish spoils; and having now calmed all the commotions in every part of the empire, he shut up the temple of Janus, which had been open about five or six years.

336
Various a-
buses re-
formed by
Vespasian.

Vespasian having thus given security and peace to the empire, resolved to correct numberless abuses which had grown up under the tyranny of his predecessors. To effect this with greater ease, he joined Titus with him in the consulship and tribunitial power, and in some measure admitted him a partner in all the highest offices of the state. He began with restraining the licentiousness of the army, and forcing them back to their pristine discipline. He abridged the processes that had been carried to an unreasonable length in the courts of justice. He took care to rebuild such parts of the city as had suffered in the late commotions; particularly the Capitol, which had been lately burnt; and which he now restored to more than former magnificence. He likewise built a famous amphitheatre, the ruins of which are to this day an evidence of its ancient grandeur. The other ruinous cities of the empire also shared his paternal care; he improved such as were declining, adorned others, and built many anew. In such acts as these he passed a long reign of clemency and moderation; so that it is said, no man suffered by an unjust or a severe decree during his administration.

Julius Sabinus seems to be the only person who was

treated with greater rigour than was usual with this emperor. Sabinus was commander of a small army in Gaul, and had declared himself emperor upon the death of Vitellius. However, his army was shortly after overcome by Vespasian's general, and he himself compelled to seek safety by flight. He for some time wandered through the Roman provinces, without being discovered: but finding the pursuit every day become closer, he was obliged to hide himself in a cave; in which he remained concealed for no less than nine years, attended all the time by his faithful wife Empona, who provided provisions for him by day, and repaired to him by night. However, she was at last discovered in the performance of this pious office, and Sabinus was taken prisoner and carried to Rome. Great intercession was made to the emperor in his behalf: Empona herself appearing with her two children, and imploring her husband's pardon. However, neither her tears nor intreaties could prevail; Sabinus had been too dangerous a rival for mercy; so that, though she and her children were spared, her husband suffered by the executioner.

Rome.
337
Adventures
and death
of Julius Sa-
binus.

But this seems to be the only instance in which he repented past offences. He caused the daughter of Vitellius, his avowed enemy, to be married into a noble family, and he himself provided her a suitable fortune. One of Nero's servants coming to beg for pardon for having once rudely thrust him out of the palace, and insulted him when in office, Vespasian only took his revenge by serving him just in the same manner. When any plots or conspiracies were formed against him, he disdained to punish the guilty, saying, That they deserved rather his contempt for their ignorance, than his resentment; as they seemed to envy him a dignity of which he daily experienced the uneasiness. His liberality towards the encouragement of arts and learning, was not less than his clemency. He settled a constant salary of 100,000 sesterces upon the teachers of rhetoric. He was particularly favourable to Josephus, the Jewish historian. Quintilian the orator, and Pliny the naturalist, flourished in his reign, and were highly esteemed by him. He was no less an encourager of all other excellencies in art; and invited the greatest masters and artificers from all parts of the world, making them considerable presents, as he found occasion.

338
Clemency
and good
qualities of
the empe-
ror.

Yet all his numerous acts of generosity and magnificence could not preserve his character from the imputation of rapacity and avarice. He revived many obsolete methods of taxation; and even bought and sold commodities himself, in order to increase his fortune. He is charged with advancing the most avaricious governors to the provinces, in order to share their plunder on their return to Rome. He descended to some very unusual and dishonourable imposts, even to the laying a tax upon urine. When his son Titus remonstrated against the meanness of such a tax, Vespasian taking a piece of money, demanded if the smell offended him; and then added, that this very money was produced by urine. But in excuse for this, we must observe, that the exchequer, when Vespasian came to the throne, was so much exhausted, that he informed the senate that it would require a supply of three hundred millions (of our money) to re-establish the commonwealth. This necessity must naturally produce more numerous and heavy taxations than the empire had hitherto experienced; but while the provinces were thus obliged to contribute

Rome.

contribute to the support of his power, he took every precaution to provide for their safety; so that we find but two insurrections in this reign.—In the fourth year of his reign, Antiochus king of Comagena, holding a private correspondence with the Parthians, the declared enemies of Rome, was taken prisoner in Cilicia, by Pyrrhus the governor, and sent bound to Rome. But Vespasian generously prevented all ill treatment, by giving him a residence at Lacedæmon, and allowing him a revenue suitable to his dignity. About the same time also, the Alani, a barbarous people inhabiting along the river Tanais, abandoned their barren wilds, and invaded the kingdom of Media. From thence passing into Armenia, after great ravages, they overthrew Tiridates, the king of that country, with prodigious slaughter. Titus was at length sent to chastise their insolence: but the barbarians retired at the approach of the Roman army, loaded with plunder; being compelled to wait a more favourable opportunity of renewing their irruptions. These incursions, however, were but a transient storm, the effects of which were soon repaired by the emperor's moderation and assiduity. We are told, that he now formed and established a thousand nations, which had scarcely before amounted to 200. No provinces in the empire lay out of his view and protection. He had, during his whole reign, a particular regard to Britain; his generals, Petilius Cerealis, and Julius Frontinus, brought the greatest part of the island into subjection; and Agricola, who succeeded soon after, completed what they had begun. See ENGLAND.

339
Death of
Vespasian.

In this manner, having reigned 10 years, loved by his subjects, and deserving their affection, he was surprised by an indisposition at Campania, which he at once declared would be fatal, crying out, in the spirit of Paganism, "Methinks I am going to be a god." Removing from thence to the city, and afterwards to a country-seat near Reate, he was there taken with a flux, which brought him to the last extremity. However, perceiving his end approach, and just going to expire, he cried out, that an emperor ought to die standing; wherefore, raising himself upon his feet, he expired in the hands of those that sustained him.

340
Titus suc-
ceeds to the
empire.

Titus being joyfully received as emperor, notwithstanding a slight opposition from his brother Domitian, who maintained that he himself was appointed, and that Titus had falsified the will, began his reign with every virtue that became an emperor and a man. During the life of his father there had been many imputations against him; but upon his exaltation to the throne he seemed entirely to take leave of his former vices, and became an example of the greatest moderation and humanity. He had long loved Berenice, sister to Agrippa king of Judea, a woman of the greatest beauty and allurements. But knowing that the connection with her was entirely disagreeable to the people of Rome, he sent her away, notwithstanding their mutual passion and the many arts she used to induce him to change his resolutions. He next discarded all those who had been the former ministers of his pleasures, and forbore to countenance the companions of his looser recreations, though he had formerly taken great pains in the selection. This moderation, added to his justice and generosity, procured him the love of all good men, and the appellation of the *delight of mankind*, which all his ac-

tions seemed calculated to ensure. As he came to the throne with all the advantages of his father's popularity, he was resolved to use every method to increase it. He therefore took particular care to punish all informers, false witnesses, and promoters of dissension, condemning them to be scourged in the most public streets, next to be dragged through the theatre, and then to be banished to the uninhabited parts of the empire, and sold as slaves. His courtesy and readiness to do good have been celebrated even by Christian writers; his principal rule being, never to send any petitioner dissatisfied away. One night, recollecting that he had done nothing beneficial to mankind the day preceding, he cried out among his friends, "I have lost a day." A sentence too remarkable not to be universally known.

In this reign, an eruption of mount Vesuvius did considerable damage, overwhelming many towns, and sending its ashes into countries more than 100 miles distant. Upon this memorable occasion, Pliny the naturalist lost his life; for, being impelled by too eager a curiosity to observe the eruption, he was suffocated in the flames †. There happened also about this time a † See Vesuvius. fire at Rome, which continued three days and nights successively, which was followed by a plague, in which 10,000 men were buried in a day. The emperor, however, did all that lay in his power to repair the damage sustained by the public; and, with respect to the city, declared that he would take the whole loss of it upon himself. These disasters were in some measure counterbalanced by the successes in Britain, under Agricola. This excellent general having been sent into that country towards the latter end of Vespasian's reign, showed himself equally expert in quelling the refractory, and civilizing those who had formerly submitted to the Roman power. The Ordovices, or inhabitants of North Wales, were the first that were subdued. He then made a descent upon Mona, or the island of Anglesea; which surrendered at discretion. Having thus rendered himself master of the whole country, he took every method to restore discipline to his own army, and to introduce some share of politeness among those whom he had conquered. He exhorted them, both by advice and example, to build temples, theatres, and stately houses. He caused the sons of their nobility to be instructed in the liberal arts; he had them taught the Latin language, and induced them to imitate the Roman modes of dressing and living. Thus, by degrees, this barbarous people began to assume the luxurious manners of their conquerors, and in time even outdid them in all the refinements of sensual pleasure. For the success in Britain, Titus was saluted emperor the 15th time; but he did not long survive his honours, being seized with a violent fever at a little distance from Rome. Perceiving his death to approach, he declared, that during the whole course of his life he knew but of one action which he repented of; but that action he did not think proper to express. Shortly after, he died (not without suspicion of treachery from his brother Domitian, who had long wished to govern) in the 41st year of his age, having reigned two years two months and twenty days.

The love which all ranks of people bore to Titus, facilitated the election of his brother Domitian, notwithstanding the ill opinion many had already conceived of him. His ambition was already but too well known,

341
A dread-
ful erup-
tion of Ve-
suvius.

† See Vesuvius.

342
Agricola
civilizes
the Bri-
tons.

343
Titus dies.

344
Succeeded
by Domi-
tian.

Rome. known, and his pride soon appeared upon his coming to the throne; having been heard to declare, that he had given the empire to his father and brother, and now received it again as his due.

The beginning of his reign was universally acceptable to the people, as he appeared equally remarkable for his clemency, liberality, and justice. He carried his abhorrence of cruelty so far, as at one time to forbid the sacrificing of oxen. His liberality was such, that he would not accept of the legacies that were left him by such as had children of their own. His justice was such, that he would sit whole days and reverse the partial sentences of the ordinary judges. He appeared very careful and liberal in repairing the libraries which had been burnt, and recovering copies of such books as had been lost, sending on purpose to Alexandria to transcribe them. But he soon began to show the natural deformity of his mind. Instead of cultivating literature, as his father and brother had done, he neglected all kinds of study, addicting himself wholly to the meaner pursuits, particularly archery and gaming. No emperor before him entertained the people with such various and expensive shows. During these diversions he distributed great rewards; sitting as president himself, adorned with a purple robe and crown, with the priests of Jupiter and the college of Flavian priests about him. The meanness of his occupations in solitude were a just contrast to his exhibitions in public ostentation. He usually spent his hours of retirement in catching flies, and sticking them through with a bodkin; so that one of his servants being asked if the emperor was alone, he answered, that he had not so much as a fly to bear him company. His vices seemed every day to increase with the duration of his reign; and as he thus became more odious to his people, all their murmurs only served to add strength to his suspicions, and malice to his cruelty. His ungrateful treatment of Agricola seemed the first symptom of his natural malevolence. Domitian was always particularly fond of obtaining a military reputation, and therefore jealous of it in others. He had marched some time before into Gaul, upon a pretended expedition against the Catti, a people of Germany; and, without ever seeing the enemy, resolved to have the honour of a triumph upon his return to Rome. For that purpose he purchased a number of slaves, whom he dressed in German habits; and at the head of this miserable procession entered the city, amidst the apparent acclamations and concealed contempt of all his subjects. The successes, therefore, of Agricola in Britain affected him with an extreme degree of envy. This admirable general, who is scarce mentioned by any writer except Tacitus, pursued the advantages which he had already obtained. He routed the Caledonians; overcame Galgacus, the British chief, at the head of 30,000 men; and afterwards sending out a fleet to scour the coast, first discovered Great Britain to be an island*. He likewise discovered and subdued the Orkneys, and thus reduced the whole into a civilized province of the Roman empire. When the account of these successes was brought to Domitian, he received it with a seeming pleasure, but real uneasiness. He thought Agricola's rising reputation a reproach upon his own inactivity; and, instead of attempting to emulate, he resolved to suppress the merit of his services. He ordered him, therefore, the external marks of his approbation, and

345
His enormous vices.

* See Scotland.

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took care that triumphant ornaments, statues, and other honours, should be decreed him; but at the same time he removed him from his command, under a pretence of appointing him to the government of Syria. By these means, Agricola surrendered up his government to Salustius Lucullus, but soon found that Syria was otherwise disposed of. Upon his return to Rome, which was privately and by night, he was coolly received by the emperor; and dying some time after in retirement, it was supposed by some that his end was hastened by Domitian's direction.

Domitian soon after found the want of so experienced a commander in the many irruptions of the barbarous nations that surrounded the empire. The Sarmatians in Europe, joined with those in Asia, made a formidable invasion; at once destroying a whole legion, and a general of the Romans. The Dacians, under the conduct of Decebalus their king, made an irruption, and overthrew the Romans in several engagements. Losses were followed by losses, so that every season became memorable for some remarkable overthrow. At last, however, the state making a vigorous exertion of its internal power, the barbarians were repelled, partly by force and partly by the assistance of money, which only served to enable them to make future invasions to greater advantage. But in whatever manner the enemy might have been repelled, Domitian was resolved not to lose the honour of a triumph. He returned in great splendor to Rome; and not contented with thus triumphing twice without a victory, he resolved to take the surname of *Germanicus*, for his conquest over a people with whom he never contended.

In proportion as the ridicule increased against him, his pride seemed every day to demand greater homage. He would permit his statues to be made only of gold and silver; assumed to himself divine honours; and ordered that all men should treat him with the same appellations which they gave to the divinity. His cruelty was not behind his arrogance; he caused numbers of the most illustrious senators and others to be put to death upon the most trifling pretences. Salustius Lucullus, his lieutenant in Britain, was destroyed only for having given his own name to a new sort of lances of his own invention. Junius Rusticus died for publishing a book, in which he commended Thrasea and Priscus, two philosophers who opposed Vespasian's coming to the throne.

Such cruelties as these, that seem almost without a motive, may naturally be supposed to have produced rebellion. Lucius Antonius, governor in Upper Germany, knowing how much the emperor was detested at home, assumed the ensigns of imperial dignity. As he was at the head of a formidable army, his success remained long doubtful; but a sudden overflowing of the Rhine dividing his army, he was set upon at that juncture by Normandus, the emperor's general, and totally routed. The news of this victory, we are told, was brought to Rome by supernatural means, on the same day that the battle was fought. Domitian's severity was greatly increased by this success, of short duration. In order to discover those who were accomplices with the adverse party, he invented new tortures, sometimes cutting off the hands, at other times thrusting fire into the privities, of the people whom he suspected of being his enemies. During these cruelties, he aggravated

Rome.

346
Many barbarous nations invaded the empire.

347
Monstrous cruelty of the emperor.

Rome.

their guilt by hypocrisy, never pronouncing sentence without a preamble full of gentleness and mercy. He was particularly terrible to the senate and nobility, the whole body of whom he frequently threatened entirely to extirpate. At one time, he surrounded the senate-house with his troops, to the great consternation of the senators. At another, he resolved to amuse himself with their terrors in a different manner. Having invited them to a public entertainment, he received them all very formally at the entrance of his palace, and conducted them into a spacious hall, hung round with black, and illuminated by a few melancholy lamps, that diffused light only sufficient to show the horrors of the place. All around were to be seen nothing but coffins, with the names of each of the senators written upon them, together with other objects of terror, and instruments of execution. While the company beheld all the preparations with silent agony, several men, having their bodies blackened, each with a drawn sword in one hand and a flaming torch in the other, entered the hall, and danced round them. After some time, when the guests expected nothing less than instant death, well knowing Domitian's capricious cruelty, the doors were set open, and one of the servants came to inform them, that the emperor gave all the company leave to withdraw.

348
He persecutes the
Jews and
Christians.

These cruelties were rendered still more odious by his lust and avarice. Frequently after presiding at an execution, he would retire with the lowliest prostitutes, and use the same baths which they did. His avarice, which was the consequence of his profusion, knew no bounds. He seized upon the estates of all against whom he could find the smallest pretensions; the most trifling action or word against the majesty of the prince was sufficient to ruin the possessor. He particularly exacted large sums from the rich Jews; who even then began to practise the art of peculation, for which they are at present so remarkable. He was excited against them, not only by avarice, but by jealousy. A prophecy had been long current in the east, that a person from the line of David should rule the world. Whereupon, this suspicious tyrant, willing to evade the prediction, commanded all the Jews of the lineage of David to be diligently sought out, and put to death. Two Christians, grandsons of St Jude the apostle, of that line, were brought before him; but finding them poor, and no way ambitious of temporal power, he dismissed them, considering them as objects too mean for his jealousy. However, his persecution of the Christians was more severe than that of any of his predecessors. By his letters and edicts they were banished in several parts of the empire, and put to death with all the tortures of ingenious cruelty. The predictions of Chaldeans and astrologers also, concerning his death, gave him most violent apprehensions, and kept him in the most tormenting disquietude. As he approached towards the end of his reign, he would permit no criminal, or prisoner, to be brought into his presence, till they were bound in such a manner as to be incapable of injuring him; and he generally secured their chains in his own hands. His jealousies increased to that degree, that he ordered the gallery in which he walked to be set round with a pellucid stone, which served as a mirror to reflect the persons of all such as approached him from behind. Every omen and prodigy gave him fresh anxiety.

But a period was soon to be put to this monster's

cruelty. Among the number of those whom he at once Rome. 349
caressed and suspected, was his wife Domitia, whom he had taken from Ælius Lama, her former husband. A conspi-
This woman, however, was become obnoxious to him, racy form-
for having placed her affections upon one Paris, a ed against
player; and he resolved to dispatch her, with several him.
others that he either hated or suspected. It was the ty-
rant's method to put down the names of all such as he
intended to destroy in his tablets, which he kept about
him with great circumspection. Domitia, fortunately
happening to get a sight of them, was struck at finding
her own name in the catalogue of those fated to destruc-
tion. She showed the fatal list to Norbanus and Pe-
tronus, præfects of the prætorian bands, who found
themselves set down; as likewise to Stephanus, the
comptroller of the household, who came into the con-
spiracy with alacrity. Parthenius also, the chief cham-
berlain, was of the number. These, after many con-
sultations, determined on the first opportunity to put
their design in execution; and at length fixed on the
18th day of September for the completion of their at-
tempt. Domitian, whose death was every day fore-
told by the astrologers, who, of consequence, must at
last be right in their predictions, was in some measure
apprehensive of that day; and as he had been ever ti-
morous, so he was now more particularly upon his
guard. He had some time before secluded himself in
the most secret recesses of his palace; and at midnight
was so affrighted as to leap out of his bed, inquiring
of his attendants what hour of the night it was. Upon
their falsely assuring him that it was an hour later than
that which he was taught to apprehend, quite trans-
ported, as if all danger was past, he prepared to go to
the bath. Just then, Parthenius his chamberlain came
to inform him that Stephanus the comptroller of his
household desired to speak to him upon an affair of the
utmost importance. The emperor having given orders
that his attendants should retire, Stephanus entered
with his hand in a scarf, which he had worn thus for
some days, the better to conceal a dagger, as none were
permitted to approach the emperor except unarmed.—
He began by giving information of a pretended conspi-
racy, and exhibited a paper in which the particulars
were specified. While Domitian was reading the con-
tents with an eager curiosity, Stephanus drew his dag-
ger, and struck him in the groin. The wound not be-
ing mortal, Domitian caught hold of the assassin, and
threw him upon the ground, calling out for assistance.
He demanded also his sword, that was usually placed
under his pillow; and a boy who attended in the apart-
ment running to fetch it, found only the scabbard, for
Parthenius had previously removed the blade. The
struggle with Stephanus still continued: Domitian still
kept him under, and at one time attempted to wrest the
dagger from his hand, at another to tear out his eyes
with his fingers. But Parthenius, with his freedman,
a gladiator, and two subaltern officers, now coming in,
ran all furiously upon the emperor, and dispatched him
with many wounds. In the mean time, some of the
officers of the guard being alarmed, came to his assist-
ance, but too late to save him; however, they slew
Stephanus on the spot.

When it was publicly known that Domitian was
slain, the joy of the senate was so great, that being af-
sembled with the utmost haste, they began to load his
memory

350
He is mur-
dered.

Rome. memory with every reproach. His statues were commanded to be taken down; and a decree was made, that all his inscriptions should be erased, his name struck out of the registers of fame, and his funeral omitted. The people, who now took little part in the affairs of government, looked on his death with indifference; the soldiers alone, whom he had loaded with favours, and enriched by largesses, sincerely regretted their benefactor. The senate, therefore, resolved to provide a successor before the army could have an opportunity of taking the appointment upon themselves: and Cocceius Nerva was chosen to the empire the very day on which the tyrant was slain.

351
Cocceius
Nerva
made em-
peror.

Nerva was of an illustrious family, as most say, by birth a Spaniard, and above 65 years old when he was called to the throne. He was, at that time, the most remarkable man in Rome, for his virtues, moderation, and respect to the laws; and he owed his exaltation to the blameless conduct of his former life. When the senate went to pay him their submissions, he received them with his accustomed humility; while Arius Antonius, his most intimate friend, having embraced him with great familiarity, congratulated him on his accession to the empire: and indeed no emperor had ever shewn himself more worthy of the throne than Nerva; his only fault being that he was too indulgent, and often made a prey by his insidious courtiers.

352
His great
clemency
and mode-
ration.

However, an excess of indulgence and humanity were faults that Rome could easily pardon, after the cruelties of such an emperor as Domitian. Being long accustomed to tyranny, they regarded Nerva's gentle reign with rapture, and even gave his imbecility the name of benevolence. Upon coming to the throne, he solemnly swore that no senator of Rome should be put to death by his command, during his reign, though they gave ever so just a cause. He conferred great favours, and bestowed large gifts, upon his particular friends. His liberality was so extensive, that, upon his first promotion to the empire, he was constrained to sell his gold and silver plate, with his other rich moveables, to enable him to continue his liberalities. He released the cities of the empire from many severe impositions, which had been laid upon them by Vespasian; took off a rigorous tribute, which had been laid upon carriages; and restored those to their property who had been unjustly dispossessed by Domitian.

353
Makes fe-
veral good
laws.

During his short reign he made several good laws. He particularly prohibited the castration of male children; which had been likewise condemned by his predecessor, but not wholly removed. He put all those slaves to death who had, during the last reign, informed against their masters. He permitted no statues to be erected to honour him, and converted into money such of Domitian's as had been spared by the senate. He sold many rich robes, and much of the splendid furniture of the palace, and retrenched several unreasonable expences at court. At the same time, he had so little regard for money, that when Herodes Atticus, one of his subjects, had found a large treasure, and wrote to the emperor how to dispose of it, he received for answer, that he might *use it*; but the finder still informing the emperor that it was a fortune too large for a private person, Nerva, admiring his honesty, wrote him word, that then he might *abuse it*.

A life of such generosity and mildness was not,

however, without its enemies. Calpurnius Crassus, with some others, formed a dangerous conspiracy to destroy him; but Nerva would use no severity: he rested satisfied with banishing those who were culpable, though the senate were for inflicting more rigorous punishments. But the most dangerous insurrection against his interests was from the prætorian bands; who, headed by Casparius Orianus, insisted upon revenging the late emperor's death, whose memory was still dear to them from his frequent liberalities. Nerva, whose kindness to good men rendered him still more obnoxious to the vicious, did all in his power to stop the progress of this insurrection; he presented himself to the mutinous soldiers, and, opening his bosom, desired them to strike there, rather than be guilty of so much injustice. The soldiers, however, paid no regard to his remonstrances; but, seizing upon Petronius and Parthenius, slew them in the most ignominious manner. Not content with this, they even compelled the emperor to approve of their sedition, and to make a speech to the people, in which he thanked the cohorts for their fidelity. So disagreeable a constraint upon the emperor's inclinations was, in the end, attended with the most happy effects, as it caused the adoption of Trajan to succeed him in the empire. Nerva perceived that in the present turbulent disposition of the times, he stood in need of an assistant in the empire, who might share the fatigues of govern-ment, and contribute to keep the licentious in awe. For this purpose, setting aside all his own relations, he fixed upon Ulpius Trajan, an utter stranger to his family, who was then governor in Upper Germany, to succeed him. Having put his determination in execution, and performed the accustomed solemnities, he instantly sent off ambassadors to Cologne, where Trajan then resided, intreating his assistance in punishing those from whom he had received such an insult. The adoption of this admirable man, proved so great a curb to the licentiousness of the soldiery, that they continued in perfect obedience during the rest of this reign; and Casparius being sent to him, was, by his command, either banished or put to death.

354
Adopts
Trajan as
his succes-
sor.

The adopting Trajan was the last public act of Nerva. In about three months after, having put himself in a violent passion with one Regulus a senator, he was seized with a fever, of which he shortly after died, after a short reign of one year four months and nine days. He was the first foreign emperor who reigned in Rome, and justly reputed a prince of great generosity and moderation. He is also celebrated for his wisdom, though with less reason, the greatest instance he gave of it, during his reign, being in the choice of his successor.

355
Death of
Nerva.

Trajan's family was originally from Italy, but he himself was born in Seville in Spain. He very early accompanied his father, who was a general of the Romans, in his expeditions along the Euphrates and the Rhine; and while yet very young, acquired a considerable reputation for military accomplishments. He enured his body to fatigue; he made long marches on foot; and laboured to acquire all that skill in war which was necessary for a commander. When he was made general of the army in Lower Germany, which was one of the most considerable employments in the empire, it made no alteration in his manners or way of living; and the commander was seen noway differing from the private tribune, except in his superior wisdom and vir-

356
Great qua-
lities of
Trajan.

Rome. *tues.* The great qualities of his mind were accompanied with all the advantages of person. His body was majestic and vigorous; he was at that middle time of life which is happily tempered with the warmth of youth and the caution of age, being 42 years old. To these qualities were added, a modesty that seemed peculiar to himself alone; so that mankind found a pleasure in praising those accomplishments of which the possessor seemed no way conscious. Upon the whole, Trajan is distinguished as the greatest and the best emperor of Rome. Others might have equalled him in war, and some might have been his rivals in clemency and goodness; but he seems the only prince who united these talents in the greatest perfection, and who appears equally to engage our admiration and our regard. Upon being informed of the death of Nerva, he prepared to return to Rome, whither he was invited by the united intreaties of the state. He therefore began his march with a discipline that was for a long time unknown in the armies of the empire. The countries through which he passed were neither ravaged nor taxed, and he entered the city, not in a triumphant manner, though he had deserved it often, but on foot, attended by the civil officers of the state, and followed by his soldiers, who marched silently forward with modesty and respect. It would be tedious and unnecessary to enter into a detail of this good monarch's labours for the state. His application to business, his moderation to his enemies, his modesty in exaltation, his liberality to the deserving, and his frugality in his own expences; these have all been the subject of panegyric among his contemporaries, and they continue to be the admiration of posterity. Upon giving the prefect of the pretorian band the sword, according to custom, he made use of this remarkable expression, "Take this sword, and use it, if I have merit, for me; if otherwise, against me." After which he added, That he who gave laws was the first who was bound to observe them. His failings were his love of women, which, however, never hurried him beyond the bounds of decency; and his immoderate passion for war, to which he had been bred up from his childhood. The first war he was engaged in after his coming to the throne was with the Dacians, who, during the reign of Domitian, had committed numberless ravages upon the provinces of the empire. He therefore raised a powerful army, and with great expedition marched into those barbarous countries, where he was vigorously opposed by Decebalus, the Dacian king, who for a long time withstood his boldest efforts; but was at last entirely reduced, and his kingdom made a Roman province, See DACIA. At his return to Rome, he entered the city in triumph; and the rejoicings for his victories lasted for the space of 120 days.

Having thus given peace and prosperity to the empire, Trajan continued his reign, loved, honoured, and almost adored, by his subjects. He adorned the city with public buildings; he freed it from such men as lived by their vices; he entertained persons of merit with the utmost familiarity; and so little feared his enemies, that he could scarcely be induced to suppose that he had any.

357
He persecutes the
Christians.

It had been happy for this great prince's memory, if he had shown equal clemency to all his subjects; but, about the ninth year of his reign, he was persuaded to

look upon the Christians with a suspicious eye. The extreme veneration which he professed for the religion of the empire, set him sedulously to oppose every innovation, and the progress of Christianity seemed to alarm him. A law had for some time before been passed, in which all Heteriæ, or societies dissenting from the established religion, were considered as illegal, being reputed nurseries of imposture and sedition. Under the sanction of this law, the Christians were persecuted in all parts of the empire. Great numbers of them were put to death, as well by popular tumults as by edicts and judicial proceedings. However, the persecution ceased after some time; for the emperor having advice from Pliny, the pro-consul in Bithynia, of the innocence and simplicity of the Christians, and of their inoffensive and moral way of living, he suspended their punishments. But a total stop was put to them upon Tiberianus the governor of Palestine's sending him word, That he was wearied out with executing the laws against the Galileans, who crowded to execution in such multitudes, that he was at a loss how to proceed. Upon this information, the emperor gave orders, that the Christians should not be sought after; but if any offered themselves, that they should suffer. In this manner the rage of persecution ceased, and the emperor found leisure to turn the force of his arms against the Armenians and Parthians, who now began to throw off all submission to Rome.

While he was employed in these wars, there was a³⁵⁸ dreadful insurrection of the Jews in all parts of the empire. This wretched people, still infatuated, and ever expecting some signal deliverer, took the advantage of Trajan's absence in the east to massacre all the Greeks and Romans whom they got into their power, without reluctance or mercy. This rebellion first began in Cyrene, a Roman province in Africa; from thence the flame extended to Egypt, and next to the island of Cyprus. These places they in a manner dispeopled with ungovernable fury. Their barbarities were such, that they eat the flesh of their enemies, wore their skins, sawed them asunder, cast them to wild beasts, made them kill each other, and studied new torments by which to destroy them. However, these cruelties were of no long duration: the governors of the respective provinces making head against their tumultuous fury, soon treated them with a retaliation of cruelty, and put them to death, not as human beings, but as outrageous pests to society. As the Jews had practised their cruelties in Cyprus particularly, a law was publicly enacted, by which it was made capital for any Jew to set foot on the island.

During these bloody transactions, Trajan was pro-³⁵⁹secuting his successes in the east. His first march was into Armenia, the king of which country had disclaimed all alliance with Rome, and received the ensigns of royalty and dominion from the monarch of Parthia. However, upon the news of Trajan's expedition, his fears were so great, that he abandoned his country to the invaders; while the greatest part of his governors and nobility came submissively to the emperor, acknowledging themselves his subjects, and making him the most costly presents. Having in this manner taken possession of the whole country, and gotten the king into his power, he marched into the dominions of the king

Rome. king of Parthia. There entering the opulent kingdom of Mesopotamia, he reduced it into the form of a Roman province. From thence he went against the Parthians, marching on foot at the head of his army; in this manner crossing the rivers, and conforming to all the severities of discipline which were imposed on the meanest soldier. His successes against the Parthians were great and numerous. He conquered Syria and Chaldaea, and took the famous city of Babylon. Here, attempting to cross the Euphrates, he was opposed by the enemy, who were resolved to stop his passage: but he secretly caused boats to be made upon the adjoining mountains; and bringing them to the water side, passed his army with great expedition, not, however, without great slaughter on both sides. From thence he traversed tracts of country which had never before been invaded by a Roman army, and seemed to take a pleasure in pursuing the same march which Alexander the Great had formerly marked out for him. Having passed the rapid streams of the Tigris, he advanced to the city Ctesiphon, which he took, and opened himself a passage into Persia, where he made many conquests, that were rather splendid than serviceable. After subduing all the country bordering on the Tigris, he marched southward to the Persian gulph, where he subdued a monarch who possessed a considerable island made by the divided streams of that river. Here, winter coming on, he was in danger of losing the greatest part of his army by the inclemency of the climate and the inundations of the river. He therefore with indefatigable pains fitted out a fleet, and sailing down the Persian gulph, entered the Indian ocean, conquering, even to the Indies, and subduing a part of them to the Roman empire. He was prevented from pursuing further conquests in this distant country, both by the revolt of many of the provinces he had already subdued, and by the scarcity of provisions, which seemed to contradict the reports of the fertility of the countries he was induced to invade. The inconveniences of increasing age also contributed to damp the ardour of this enterprise, which at one time he intended to pursue to the confines of the earth. Returning, therefore, along the Persian gulph, and sending the senate a particular account of all the nations he had conquered, the names of which alone composed a long catalogue, he prepared to punish those countries which had revolted from him. He began by laying the famous city of Edeffa, in Mesopotamia, in ashes; and in a short space of time, not only retook all those places which had before acknowledged subjection, but conquered many other provinces, so as to make himself master of the most fertile kingdoms of all Asia. In this train of successes he scarce met with a repulse, except before the city Atræ, in the deserts of Arabia. Wherefore judging that this was a proper time for bounding his conquests, he resolved to give a master to the countries he had subdued. With this resolution he repaired to the city Ctesiphon, in Persia; and there, with great ceremony, crowned Parthaspates king of Parthia, to the great joy of all his subjects. He established another king also over the kingdom of Albania, near the Caspian sea. Then placing governors and lieutenants in other provinces, he resolved to return to his capital in a more magnificent manner than any of his predecessors had done before him. He accordingly left Adrian general of all

his forces in the east; and continued his journey towards Rome, where the most magnificent preparations were made for his arrival. However, he had not got farther than the province of Cilicia, when he found himself too weak to proceed in his usual manner. He therefore caused himself to be carried on ship-board to the city of Seleucia, where he died of the apoplexy, having been attacked by that disorder once before. During the time of his indisposition, his wife Plotina constantly attended near him; and, knowing the emperor's dislike to Adrian, it is thought forged the will, by which he was adopted to succeed.

Trajan died in the 63d year of his age, after a reign of nineteen years six months and fifteen days. ³⁶⁰How and is succeeded by Adrian. highly he was esteemed by his subjects appears by their manner of blessing his successors, always wishing them the fortune of Augustus, and the goodness of Trajan. His military virtues, however, upon which he chiefly valued himself, produced no real advantages to his country; and all his conquests disappeared, when the power was withdrawn that enforced them.

Adrian was by descent a Spaniard, and his ancestors were of the same city where Trajan was born. He was nephew to Trajan, and married to Sabina his grand-niece. When Trajan was adopted to the empire, Adrian was a tribune of the army in Mæsia, and was sent by the troops to congratulate the emperor on his advancement. However, his brother-in-law, who desired to have an opportunity of congratulating Trajan himself, supplied Adrian with a carriage that broke down on the way. But Adrian was resolved to lose no time, and performed the rest of the journey on foot. This assiduity was very pleasing to the emperor; but he disliked Adrian from several more prevailing motives. His kinsman was expensive, and involved in debt. He was, besides, inconstant, capricious, and apt to envy another's reputation. These were faults, that, in Trajan's opinion, could not be compensated either by his learning or his talents. His great skill in the Greek and Latin languages, his intimate acquaintance with the laws of his country and the philosophy of the times, were no inducement to Trajan, who, being bred himself a soldier, desired to have a military man to succeed him. For this reason it was that the dying emperor would by no means appoint a successor; fearful, perhaps, of injuring his great reputation, by adopting a person that was unworthy. His death, therefore, was concealed for some time by Plotina his wife, till Adrian had founded the inclinations of the army, and found them firm in his interests. They then produced a forged instrument, importing that Adrian was adopted to succeed in the empire. By this artifice he was elected by all orders of the state, though then absent from Rome, being left at Antioch as general of the forces in the east.

Upon Adrian's election, his first care was to write the senate, excusing himself for assuming the empire without their previous approbation; imputing it to the hasty zeal of the army, who rightly judged that the senate ought not long to remain without a head. He then began to pursue a course quite opposite to that of his predecessor, taking every method of declining war, and promoting the arts of peace. He was quite satisfied with preserving the ancient limits of the empire, and seemed no way ambitious of extensive conquest.

For

Rome,
361
He aban-
dons all the
eastern con-
quests of
Adrian.

For this reason he abandoned all the conquests which Trajan had made, judging them to be rather an inconvenience than an advantage to the empire; and made the river Euphrates the boundary of the empire, placing the legions along its banks to prevent the incursions of the enemy.

Having thus settled the affairs of the east, and leaving Severus governor of Syria, he took his journey by land to Rome, sending the ashes of Trajan thither by sea. Upon his approach to the city, he was informed of a magnificent triumph that was preparing for him; but this he modestly declined, desiring that those honours might be paid to Trajan's memory which they had designed for him. In consequence of this command, a most superb triumph was decreed, in which Trajan's statue was carried as a principal figure in the procession, it being remarked that he was the only man that ever triumphed after he was dead. Not content with paying him these extraordinary honours, his ashes were placed in a golden urn, upon the top of a column 140 feet high. On this were engraven the particulars of all his exploits in basso relievo; a work of great labour, and which is still remaining. These testimonies of respect to the memory of his predecessor did great honour to the heart of Adrian. His virtues, however, were contrasted by a strange mixture of vices; or to say the truth, he wanted strength of mind to preserve his general rectitude of character without deviation. As an emperor, however, his conduct was most admirable, as all his public transactions appear dictated by the soundest policy and the most disinterested wisdom. But these being already enumerated under the article ADRIAN, it would be superfluous to repeat them in this place. He was succeeded by Marcus Antoninus, afterwards surnamed the *Pious*, whom he had adopted some time before his death. See *ANTONINUS Pius*.

362
Causes of
the decline
of the Ro-
man em-
pire.

From the beginning of the reign of Antoninus Pius, we may date the decline of the Roman empire. From the time of Cæsar to that of Trajan, scarce any of the emperors had either abilities or inclination to extend

the limits of the empire, or even to defend it against the barbarous nations who surrounded it. During all this space, only some inconsiderable provinces to the northward of Italy, and part of the island of Britain, had been subjugated. However, as yet, nothing was lost; but the degeneracy and corruption of the people had sown those seeds of dissolution which the empire quickly began to feel. The disorders were grown to such an height, that even Trajan himself could not cure them. Indeed his eastern conquests could scarce have been preserved though the republic had been existing in all its glory; and therefore they were quietly resigned by his successor Adrian, as too distant, disaffected, and ready to be over-run by the barbarous nations. The province of Dacia, being nearer to the centre of government, was more easily preserved; and of consequence remained for a long time subject to Rome. During the 23 years of the reign of Antoninus, few remarkable events happened. The historians of those times are excessive in their praises of his justice, generosity, and other virtues, both public and private. He put a stop to the persecution of the Christians, which raged in the time of Trajan and Adrian, and reduced the Brigantes, a tribe of Britons, who had revolted. However, during his reign, several calamities befel the empire. The Tiber, overflowing its banks, laid the lower part of Rome under water. The inundation was followed by a fire, and this by a famine, which swept off great numbers, though the emperor took the utmost care to supply the city from the most distant provinces. At the same time the cities of Narbonne in Gaul, and Antioch in Syria, together with the great square in Carthage, were destroyed by fire; however, the emperor soon restored them to their former condition. He died in the year 163, universally lamented by his subjects, and was succeeded by Marcus Aurelius, surnamed the *Philosopher*, whom he had adopted towards the latter end of his reign.

The transactions of this emperor the reader will find related under the article *ANTONINUS Philosopher* (A).

After

(A) As, after the death of Marcus Aurelius, the Roman empire declined very fast, it may not be amiss here to give some account of the military and other establishments of the Roman emperors. Mr Gibbon observes, that, in the times of the commonwealth, the use of arms was confined to those who had some property to defend, and an interest in maintaining the laws which were proposed to be enacted. But, as the public freedom declined, and war became degraded into a trade, those who had the property of the country chose rather to hire others than to expose their own persons, as is the case with our modern armies. Yet, even after all consideration of property had been laid aside among the common soldiers, the officers continued to be chosen from among those who had a liberal education, together with a good share of property. However, as the common soldiers, in which the strength of an army consists, had now no more of that virtue called *patriotism*, the legions which were formerly almost invincible, no longer fought with the same ardour as before. In former times, the profession of a soldier was more honourable than any other; but, when the soldiers came to be looked upon as hirelings, the honour of the profession sunk of course, and, by this means, one of the strongest motives which the soldiers had to submit to their severe discipline, and exert themselves against their enemies, was removed. On the very first entrance of a soldier into the Roman service, a solemn oath was administered to him, by which he engaged never to desert his standard; to submit his own will to that of his leaders, and to sacrifice his life for the safety of the emperor and the empire. The attachment which the Romans had to their standards was indeed astonishing. The golden eagle, which appeared in the front of the legion, was almost an object of adoration with them; and it was esteemed impious, as well as ignominious, to abandon that sacred ensign in the time of danger. The centurions had a right to punish with blows, the generals with death; and it was an inflexible maxim of the Roman discipline, that a good soldier should dread his officers much more than the enemy.

Notwithstanding all this, so sensible were the Romans of the insufficiency of mere valour without skill, that military

Rome.

After the death of Marcus Aurelius, his son Commodus succeeded to the imperial throne without opposition. He was in every respect unworthy of his fa-

ther; and so prone to vice, that he was generally believed to have been the son, not of Marcus Aurelius, but of a celebrated gladiator, with whom the empress Faustina

Rome.

military exercises were the unremitted object of their discipline. The recruits and young soldiers were constantly trained both in the morning and evening; and even the veterans were not excused from the daily repetition of their exercise. Large sheds were erected in the winter-quarters of the troops, that these useful labours might not be interrupted by tempestuous weather, and the weapons used in these imitations of war were always twice as heavy as those made use of in real action. The soldiers were diligently instructed to march, to run, leap, swim, carry heavy burdens, and handle every species of weapon either for offence or defence; to form a variety of evolutions; and to move to the sound of flutes in the pyrrhic or martial dance. It was the policy of the ablest generals, and even of the emperors themselves, to encourage these military studies by their presence and example; and we are informed that Adrian, as well as Trajan, frequently condescended to instruct the unexperienced soldiers, to reward the diligent, and sometimes to dispute with them the prize of superior strength and dexterity. Under the reigns of those princes, the science of tactics was cultivated with success; and, as long as the empire retained any vigour, their military instructions were respected as the most perfect model of Roman discipline.

From the foundation of the city, as the Romans had in a manner been continually engaged in war, many alterations had taken place in the constitution of the legions. In the time of the emperors, the heavy-armed infantry, which composed its principal strength, was divided into 10 cohorts and 55 companies, under the orders of a correspondent number of tribunes and centurions. The first cohort, which always claimed the post of honour and the custody of the eagle, was formed of 1105 soldiers, the most approved for valour and fidelity. The remaining nine cohorts consisted each of 555; and the whole body of legionary infantry consisted of 6100 men. Their arms were uniform, and excellently adapted to the nature of their service; an open helmet with a lofty crest; a breast-plate or coat of mail; greaves on their legs, and a large buckler on their left arm. Their buckler was of an oblong and concave figure, four feet in length, and two and an half in breadth; framed of a light wood, covered with a bull's hide, and strongly guarded with brass plates. Besides a lighter spear, the legionary carried the pilum, a ponderous javelin about six feet long, and terminated by a massy triangular point of steel 18 inches in length. This weapon could do execution at the distance of 10 or 12 paces; but its stroke was so powerful, that no cavalry durst venture within its reach, and scarce any armour could be formed proof against it. As soon as the Roman had darted his pilum, he drew his sword, and rushed forward to close with the enemy. It was a short well-tempered Spanish blade with a double edge, and equally calculated for the purposes of pushing and striking; but the soldier was always instructed to prefer the former use of his own weapon, as his body remained thereby the less exposed, while at the same time he inflicted a more dangerous wound on his adversary. The legion was usually drawn up eight deep; and the regular distance of three feet was left between the files and ranks. Thus the soldier possessed a free space for his arms and motions; and sufficient intervals were allowed, through which seasonable reinforcements might be introduced to the relief of the combatants. The cavalry, without which the force of the legion remained imperfect, was divided into ten troops or squadrons: the first, as the companion of the first cohort, consisted of 132 men; whilst each of the other nine amounted only to 66. The entire establishment formed a body of 726 horse, naturally connected with its respective legion; but occasionally acting in the line, and composing a part of the wings of the army. The cavalry of the ancient republic was composed of the noblest youths of Rome and Italy, who, by performing their military service on horseback, prepared themselves for the offices of senator and consul; but after the alteration of manners and government which took place at the end of the commonwealth, the most wealthy of the equestrian order were engaged in the administration of justice and of the revenue; and, whenever they embraced the profession of arms, they were immediately entrusted with a troop of horse or a cohort of foot, and the cavalry, as well as the infantry, were recruited from the provinces. The horses were bred for the most part in Spain, or in Cappadocia. The Roman troopers despised the complete armour which encumbered the cavalry of the east. Instead of this, their arms consisted only of an helmet, an oblong shield, light boots, and a coat of mail. A javelin and a long broad sword were their principal offensive weapons. They seem to have borrowed the use of lances and iron maces from the barbarians.

Besides the legionaries, the Romans, especially in the times of the emperors, began to take auxiliaries into their pay. Considerable levies were regularly made among those provincials who had not yet attained to the rank of Roman citizens. Many dependent princes and communities, dispersed round the frontiers, were permitted, for a while, to hold their freedom and security by the tenure of military service. Even select troops of barbarians were compelled to enter into the service; which was afterwards found to be a most destructive expedient, not only as it carried the Roman military skill among barbarians who were otherwise unacquainted with it, but it gave these auxiliaries themselves frequent opportunities of revolting, and at last of dethroning the emperors at pleasure, and even of overturning the empire itself. The number of auxiliaries was seldom inferior to that of the legionaries themselves. The bravest and most faithful bands among them were placed under the command of prefects and centurions, and severely trained in the arts of Roman discipline; but the far greater part retained those arms which they had used in their native country. By this institution, each legion, to whom a certain number of auxiliaries was allotted, contained within itself every species of lighter troops, and of missile weapons; and

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Faustina was supposed to be intimate. According to Mr Gibbon, however, Commodus was not, as has been represented, a tiger born with an insatiate thirst of human blood, and capable from his infancy of the most inhuman actions. Nature had formed him of a weak, rather than a wicked disposition. His simplicity and timidity

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and was capable of encountering every nation with the advantages of its respective arms and discipline. Nor was the legion destitute of what, in modern language, would be styled a train of artillery. This consisted of 10 military engines of the largest size, and 56 smaller ones; but all of them, either in an oblique or horizontal manner, discharged stones and darts with irresistible violence.

The camp of a Roman legion presented the appearance of a fortified city. As soon as the space was marked out, the pioneers carefully levelled the ground, and removed every impediment that might interrupt its perfect regularity. Its form was an exact quadrangle; and it may be computed that a square of 700 yards was sufficient for the encampment of 20,000 Romans, though a similar number of modern troops would expose to the enemy a front of more than treble that extent. In the midst of the camp, the prætorium, or general's tent, arose above the others; and the cavalry, infantry, and auxiliaries, had each their respective stations appointed them. The streets were broad, and perfectly straight; and a vacant space of 200 feet was left on all sides between the tents and rampart. The rampart itself was 12 feet high, armed with a line of strong and intricate palisades, and defended by a ditch 12 feet deep and as much broad. This labour was performed by the legions themselves, to whom the use of the spade and the pick-axe was no less familiar than that of the sword or pilum. Whenever the trumpet gave the signal of departure, the camp was almost instantly broke up, and the troops fell into their ranks without delay or confusion. Besides their arms, which the soldiers scarcely considered as an incumbrance, they were laden with their kitchen-furniture, the instruments of fortification, and provisions for many days. Under this weight, which would oppress a modern soldier, they were taught to advance by a regular step, near 20 miles in six hours. On the appearance of an enemy, they threw aside their baggage, and, by easy and rapid evolutions, converted the column of march into an order of battle. The slingers and archers skirmished in the front; the auxiliaries formed the first line, and were seconded or sustained by the legions. The cavalry covered the flanks, and the military engines were placed in the rear.

The numbers of the Roman armies are not easily calculated with any tolerable accuracy. We may compute, however, that the legion, which consisted of 6831 Romans, might, with its attendant auxiliaries, amount to 12,500 men. The peace establishment of Adrian and his successors was composed of no fewer than 30 of these formidable brigades; and most probably formed an army of 370,000 men. Instead of being confined within the walls of fortified cities, which the Romans considered as the refuge of weakness or pusillanimity, the legions were encamped on the banks of the great rivers, and along the frontiers of the barbarians. Three legions were sufficient for Britain. The principal strength lay upon the Rhine and Danube, and consisted of 16 legions, disposed in the following proportions: two in the Lower, and three in the Upper Germany; one in Rhætia; one in Noricum; four in Pannonia; three in Mæsia; and two in Dacia. The defence of the Euphrates was intrusted to eight legions, six of whom were placed in Syria, and the other two in Cappadocia. With regard to Egypt, Africa, and Spain, as they were far removed from any important scene of war, a single legion maintained the domestic tranquillity of each of those great provinces. Italy was defended by the city cohorts and prætorian guards formerly mentioned. These differed nothing from the legions in their arms and institutions, except in a more splendid appearance, and a less rigid discipline.

The Roman navy, though sufficient for every useful purpose of government, never seemed adequate to the greatness of the empire. The policy of the emperors was directed only to preserve the peaceful dominion of the Mediterranean sea, which was included within their dominions, and to protect the commerce of their subjects. Two permanent fleets were stationed by Augustus, one at Ravenna on the Adriatic, and the other at Misenum in the bay of Naples. A very considerable force was also stationed at Frejus in Provence; and the Euxine was guarded by 40 ships and 3000 soldiers. To all these we may add the fleet which preserved the communication between Gaul and Britain, and a great number of vessels constantly maintained on the Rhine and Danube to harass the enemy, or intercept the passage of the barbarians. The whole military establishment by sea and land amounted to about 450,000 men.

It was not, however, to this formidable power alone that the empire owed its greatness. The policy of the laws contributed as much to its support as the martial establishment itself. According to Mr Gibbon, though the provinces might occasionally suffer from the partial abuse of delegated authority, the general principle of government was wise, simple, and beneficent. Among these beneficent principles he reckons that of universal toleration; but to this there were several exceptions: for the British Druids were persecuted and destroyed by the Romans on account of their religion; the Egyptians and Jews were sometimes persecuted; and the Christians were frequently so, and that even under the very best emperors, Trajan and Marcus Aurelius. However, as a very general toleration of religious sentiments did take place under the heathen emperors of Rome, we must certainly look upon this as one of the causes of the prosperity of the empire.

Another thing which greatly contributed to the strength and prosperity of the empire, was the extending of the freedom of Rome to so many people. "The narrow policy (says Mr Gibbon) of preserving, without any foreign mixture, the pure blood of the ancient citizens, had checked the fortune and hastened the ruin of Athens and Sparta. During the most flourishing era of the Athenian commonwealth, the number of citizens decreased gradually from about 30,000 to 21,000. If, on the contrary, we study the growth of the Roman republic, we may

Rome. timidity rendered him the slave of his attendants, who habit, and at length became the ruling passion of his Rome.
 gradually corrupted his mind. His cruelty, which at soul." But, however this may be, it is certain that the
 first obeyed the dictates of others, degenerated into actions of this emperor were flagitious almost beyond
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 Monstrous
 cruelty of
 Commodus.

may discover, that notwithstanding the incessant demands of wars and colonies, the citizens, who, in the time of Servius Tullius, amounted to no more than 83,000, were multiplied, before the end of the social war, to the number of 463,000 men able to bear arms in the service of their country. When the allies of Rome claimed an equal share of honours and privileges, the senate preferred the chance of war to a concession; however, at last, all the Italian states, except the Samnites and Lucanians, were admitted into the bosom of the republic, and soon contributed to the ruin of public freedom. When the popular assemblies had been suppressed by the administration of the emperors, the conquerors were distinguished from the vanquished nations only as the first and most honourable order of subjects; and their increase, however rapid, was no longer exposed to the same dangers. Yet the princes who adopted the maxims of Augustus, guarded with the strictest care the dignity of the Roman name, and diffused the freedom of the city with a prudent liberality.

"Till the privileges of the Romans had been progressively extended to all the inhabitants of the empire, an important distinction was preserved between Italy and the provinces. The estates of the Italians were exempted from taxes, and their persons from the arbitrary jurisdiction of governors. From the foot of the Alps to the extremity of Calabria, all the natives of Italy were born citizens of Rome. The provinces of the empire were destitute of any public force or constitutional freedom. The free states and cities, which had embraced the cause of Rome, were insensibly sunk into real servitude. The public authority was everywhere engrossed by the ministers of the senate and of the emperors, and that authority was absolute. But the same salutary maxims of government which had secured the peace and obedience of Italy, were extended to the most distant conquests. A nation of Romans was gradually formed in the provinces, by the double expedient of introducing colonies, and of admitting the most faithful and deserving provincials to the freedom of Rome.

"So sensible were the Romans of the influence of language over national manners, that it was their most serious care to extend, with the progress of their arms, the use of the Latin tongue. The eastern provinces, however, were less docile in this respect than the western ones; and this obvious difference made a distinction between the two portions of the empire, which became very remarkable when it began to decline. Nor was the influence of the Greek language and sentiments confined to the narrow limits of that once celebrated country. Their empire, by the progress of colonies and conquest, had been diffused from the Adriatic to the Euphrates and Nile. Asia was covered with Greek cities, and the long reign of the Macedonian kings had introduced a silent revolution into Syria and Egypt. In their pompous courts, those princes united the elegance of Athens with the luxury of the east; and the example of the court was imitated, at an humble distance, by the higher ranks of their subjects. Such was the general division of the Roman empire into the Latin and Greek languages; to which we may add a third distinction for the body of the natives in Syria, and especially in Egypt. The use of their ancient dialects, by secluding them from the commerce of mankind, checked the improvements of these barbarians. The slothful effeminacy of the former exposed them to the contempt, the sullen ferociousness of the latter excited the aversion, of the Roman conquerors. They seldom desired or deserved the freedom of the city; and it is remarked, that more than 230 years elapsed after the ruin of the Ptolemies, before a native Egyptian was admitted into the senate of Rome.

"The number of subjects who acknowledged the laws of Rome, of citizens, of provincials, and of slaves, cannot now be fixed with such accuracy as the importance of the object would deserve. We are informed, that when the emperor Claudius exercised the office of censor, he took an account of 6,945,000 Roman citizens; who, with the proportion of women and children, must have amounted to about 20,000,000 of souls. The multitude of subjects of an inferior rank was uncertain and fluctuating: but after weighing with attention every circumstance which could influence the balance, it seems probable that there existed, in the time of Claudius, about twice as many provincials as there were Roman citizens, of either sex, and of every age; and that the slaves were at least equal in number to the free inhabitants of the Roman world. The total amount of this imperfect calculation would rise to about 120 millions of persons; a degree of population which possibly exceeds that of modern Europe, and forms the most numerous society that has ever been united under the same system of government.

"Domestic peace and union were the natural consequences of the moderate and comprehensive policy embraced by the Romans. The vanquished nations, blended into one great people, resigned the hope, nay even the wish, of resuming their independence, and scarcely considered their own existence as distinct from the existence of Rome. The established authority of the emperors pervaded, without an effort, the wide extent of their dominions, and was exercised with the same facility on the banks of the Thames, or of the Nile, as on those of the Tiber. The legions were destined to serve against the public enemy, and the civil magistrate seldom required the aid of a military force.

"It was scarcely possible that the eyes of contemporaries should discover in the public felicity the latent causes of decay and corruption. This long peace, and the uniform government of the Romans, introduced a slow and secret poison into the vitals of the empire. The minds of men were gradually reduced to the same level; the fire of genius was extinguished, and even the military spirit evaporated. The natives of Europe were brave and robust. Spain, Gaul, Britain, and Illyricum, supplied the legions with excellent soldiers, and constituted the real

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a parallel. Many very strange instances of his cruelty are related by the ancients. He is said to have cut asunder a corpulent man whom he saw walking along the street; partly, to try his own strength, in which he greatly excelled; and partly, as he himself owned, out of curiosity, to see his entrails drop out at once. He took pleasure in cutting off the feet, and putting out the eyes, of such as he met in his rambles through the city; telling the former, after he had thus maimed them, that now they belonged to the nation of *Monopodii*; and the latter, that they were now become *Luscinii*, alluding to the word *luscus*, "one-eyed." Some he murdered because they were negligently dressed; others, because they seemed to be trimmed with too much nicety. He pretended to great skill in surgery, especially at letting blood: but sometimes, instead of easing by that means those whom he visited, or who were prevailed upon to recur to him, he cut off, by way of diversion, their ears and noses. His lewdness and debaucheries were equally remarkable, and equally infamous. However, he is said to have been exceedingly well skilled in archery, and to have performed incredible feats in that way. He excelled all men in strength; and is said to have run an elephant through with his spear, and to have killed in the amphitheatre 100 lions, one after another, and each of them at one blow. Forgetful of his dignity, he entered the lists with the common gladiators, and came off conqueror 735 times; whence he often subscribed himself in his letters, *the conqueror of 1000 gladiators*.

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He concludes a peace with the barbarians.

The public transactions of this reign were but very few. Soon after his father's death, Commodus concluded a peace with the Marcommani, Quadi, &c. on

the following conditions. 1. That they should not settle within five miles of the Danube. 2. That they should deliver up their arms, and supply the Romans with a certain number of troops when required. 3. That they should assemble but once a month, in one place only, and that in presence of a Roman centurion. 4. That they should not make war upon the Jazyges, Burri, or Vandals, without the consent of the people of Rome. On the other hand, Commodus promised to abandon, which accordingly he did, all the castles and fortresses held by the Romans in their country, excepting such as were within five miles of the Danube. With the other German nations, whom his father had almost entirely reduced, he concluded a very dishonourable peace; nay, of some he purchased it with large sums of money.

Soon after the return of the emperor to Rome, his sister Lucilla, perceiving that he was universally abhorred on account of his cruelty, formed a conspiracy against his life. Among the conspirators were many senators of distinction. It was agreed among them that they should fall upon the emperor while he was going to the amphitheatre through a narrow and dark passage; and that Claudius Pompeianus, to whom Lucilla had betrothed her daughter, should give the first blow. But he, instead of striking at once, showed him the naked dagger, and cried out, "This present the senate sends you:" so that the guards had time to rescue the emperor, and to seize the conspirators, who were soon after put to death. The emperor banished his sister to the island of Capreae, where he soon after caused her to be privately murdered.

The favourite minister of Commodus was one Perennis;

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real strength of the monarchy. Their personal valour remained; but they no longer possessed that public courage which is nourished by the love of independence, the sense of national honour, the presence of danger, and the habit of command. They received laws and governors from the will of their sovereign, and trusted for their defence to a mercenary army. The posterity of their boldest leaders were contented with the rank of citizens and subjects. The most aspiring spirits resorted to the court or standard of the emperors; and the deserted provinces, deprived of political strength or union, insensibly sunk into the languid indifference of private life.

"The love of letters, almost inseparable from peace and refinement, was fashionable among the subjects of Adrian and the Antonines; who were themselves men of learning and curiosity. It was diffused over the whole extent of their empire; the most northern tribes of Britons had acquired a taste for rhetoric; Homer as well as Virgil were transcribed and studied on the banks of the Rhine and Danube; and the most liberal rewards sought out the faintest glimmerings of literary merit. The sciences of physic and astronomy were cultivated with some degree of reputation; but, if we except Lucian, an age of indolence passed away without producing a single writer of genius who deserved the attention of posterity. The authority of Plato, of Aristotle, of Zeno, and Epicurus, still reigned in the schools; and their systems, transmitted with blind deference from one generation of disciples to another, precluded every generous attempt to correct the errors or enlarge the bounds of the human mind. The beauties of the poets and orators, instead of kindling a fire like their own, produced only servile imitations; or, if any ventured to deviate from these models, they deviated at the same time from good sense and propriety. The provincials of Rome, trained by an uniform artificial education, were engaged in a very unequal competition with those bold ancients, who, by expressing their genuine feelings in their native tongue, had already occupied every place of honour. The name of *poet* was almost forgotten; that of *orator* was usurped by the sophists. A cloud of critics, of compilers, of commentators, darkened the face of learning, and the decline of genius was soon followed by the corruption of taste.

"Longinus observes and laments the degeneracy of his contemporaries, which debased their sentiments, enervated their courage, and depressed their talents; comparing them to pigmies, whose stature has been diminished by constant pressure on their limbs. This diminutive stature of mankind was constantly sinking below the old standard, and the Roman world was indeed peopled by a race of pigmies; when the fierce giants of the north broke in and mended the puny breed. They restored a manly freedom; and, after the revolution of ten centuries, freedom became the happy parent of taste and science."

Rome. *rennis*; who in oppression and cruelty seems to have been nothing inferior to those of the most tyrannical emperors. During the first part of the reign of Commodus, he ruled with an absolute sway; but at last was torn in pieces by the enraged soldiery, whom he had offended by his too great severity. He was succeeded in his place by a freedman named *Cleander*; for the emperor himself was so much taken up with his pleasures, that he could not bestow even a moment on the affairs of state. The new minister abused his power in a more flagrant manner than even his predecessor had done. By him all things were openly set to sale; offices, provinces, public revenues, justice, and the lives of men both innocent and guilty. The minister, who ruled the emperor without controul, infused such terrors into his timorous mind, that he changed the captains of his guards almost continually. One *Niger* enjoyed the dignity only six hours; another only five days; and several others a still shorter space. Most of those officers lost their lives along with their employments; being accused of treason by *Cleander*, who continually solicited, and at last obtained, that important post for himself.

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Revolt of
Maternus

In the year 187 happened a remarkable revolt. One *Maternus*, a common soldier, having fled from his colours, and being joined by many others guilty of the same crime, grew in a short time so powerful, the banditti flocking to him from all parts, that he over-ran and plundered great part of Gaul and Spain; stormed the strongest cities; and struck the emperor and people of Rome with such terror, that troops were raised, and armies dispatched against him. *Pescennius Niger* was sent to make head against him in Gaul, where he became very intimate with *Severus*, who was then governor of Lyons, and who wrote a letter to the emperor, commending the prudent and gallant behaviour of *Niger* in pursuing the rebels. *Maternus*, finding himself reduced to great straits, divided his men into several small bands, and marched privately with them by different ways into Italy; having nothing less in view than to murder the emperor during the solemnity which was kept annually in honour of the mother of the gods, and on his death to seize upon the empire for himself. They all arrived at Rome undiscovered; and several of his men had already mixed themselves with the emperor's guards, when others of his own party betrayed him. He was immediately seized and executed; and his death put an end to the disturbances which some of his followers had begun to raise in other provinces. In the same year broke out the most dreadful plague, says *Dio Cassius*, that had been known. It lasted two or three years; and raged with the greatest violence at Rome, where it frequently carried off 2000 persons a-day. The following year a dreadful fire, which consumed a great part of the city, was kindled by lightning; and at the same time the people were afflicted with a dreadful famine, occasioned, according to some authors, by *Cleander*, who, having now in view nothing less than the sovereignty itself, bought up underhand all the corn, in order to raise the price of it, and gain the affections of the soldiery and people by distributing it among them. Others tell us, however, that *Papirius Dionysius*, whose province it was to supply the city with provisions, contributed towards the famine, in order to make the people rise against *Clean-*

der. Be this as it will, the populace ascribed all their calamities to this hated minister; and one day, while the people were celebrating the Circassian games, a troop of children, having at their head a young woman of an extraordinary stature and fierce aspect, entering the circus, began to utter aloud many bitter invectives and dreadful curses against *Cleander*; which being for some time answered by the people with other invectives and curses, the whole multitude rose all of a sudden, and flew to the place where *Cleander* at that time resided with the emperor. There, renewing their invectives, they demanded the head of the minister who had been the occasion of so many calamities. Hereupon *Cleander* ordered the prætorian cavalry to charge the multitude; which they did accordingly, driving them with great slaughter into the city. But the populace discharging showers of stones, bricks, and tiles, from the tops of the houses and from the windows, and the city-guards at the same time taking part with the people, the prætorian horse were soon obliged to save themselves by flight: nor was the slaughter ended till the emperor, apprised of the tumult, caused the head of *Cleander* to be struck off and thrown out to the enraged populace. The emperor himself did not long survive *Cleander*; being cut off by a conspiracy of *Marcia* his favourite concubine, *Lætus* captain of the guards, and *Eclectus* his chamberlain.

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No sooner was the death of *Commodus* known, than the senate assembled, and declared him a public enemy, loading him with curses, ordering his statues to be broken to pieces, and his name to be rased out of all public inscriptions; and demanded his body, that it might be dragged through the streets, and thrown into the *Tiber*. But *Helvius Pertinax*, whom the conspirators had previously designed for the empire, and who had already assumed it, prevented such an outrage, by letting the senators know that *Commodus* was already buried. This extraordinary personage had passed through many changes of fortune. He was originally the son of an enfranchised slave, called *Ælius*, who only gave him so much learning as to qualify him for keeping a little shop in the city. He then became a schoolmaster, afterwards studied the law, and after that became a soldier; in which station his behaviour was such as caused him to be soon made captain of a cohort against the Parthians. Being thus introduced to arms he went through the usual gradation of military preferment in Britain and *Mœsia*, until he became the commander of a legion under *Aurelius*. In this station he performed such excellent services against the barbarians, that he was made consul, and successively governor of *Dacia*, *Syria*, and *Asia Minor*. In the reign of *Commodus* he was banished; but soon after recalled, and sent into Britain to reform the abuses in the army. In this employment his usual extraordinary fortune attended him: he was opposed by a sedition among the legions, and left for dead among many others that were slain. However, he got over this danger, severely punished the mutineers, and established regularity and discipline among the troops he was sent to command. From thence he was removed into *Africa*, where the sedition of the soldiers had like to have been as fatal to him as in his former government. Removing from *Africa*, and fatigued with an active life, he betook himself to retirement: but *Commodus*,

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Commodus
murdered.

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Pertinax
raised to the
empire.

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willing to keep him still in view, made him prefect of the city; which employment he filled, when the conspirators fixed upon him as the properest person to succeed to the empire.

His being advanced by Commodus only served to increase his fears of falling as an object of his suspicions; when therefore the conspirators repaired to his house by night, he considered their arrival as a command from the emperor for his death. Upon Lætus entering his apartment, Pertinax, without any show of fear, cried out, That for many days he had expected to end his life in that manner, wondering that the emperor had deferred it so long. However, he was not a little surprised when informed of the real cause of their visit; and being strongly urged to accept of the empire, he at last complied with their offer.

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His excellent reign

Being carried to the camp, Pertinax was proclaimed emperor: soon after the citizens and senate consented; the joy for the election of a new sovereign being scarce equal to that for the death of the former. The provinces quickly followed the example of Rome; so that he began his reign with universal satisfaction to the whole empire, in the 68th year of his age.

Nothing could exceed the wisdom and justice of this monarch's reign the short time it continued. He punished all those who had served to corrupt the late emperor, and disposed of his ill-got possessions to public uses. He attempted to restrain the licentiousness of the prætorian bands, and put a stop to the injuries and insolences they committed against the people. He sold most of the buffoons and jesters of Commodus as slaves; particularly such as had obscene names. He continually frequented the senate as often as it sat, and never refused an audience even to the meanest of the people. His success in foreign affairs was equal to his internal policy. When the barbarous nations abroad had certain intelligence that he was emperor, they immediately laid down their arms, well knowing the opposition they were to expect from so experienced a commander. His great error was avarice; and that, in some measure, served to hasten his ruin.

The prætorian soldiers, whose manners he had attempted to reform, having been long corrupted by the indulgence and profusion of their former monarchs, began to hate him for the parsimony and discipline he had introduced among them. They therefore resolved to dethrone him; and for that purpose declared Maternus, an ancient senator, emperor, and endeavoured to carry him to the camp to proclaim him. Maternus, however, was too just to the merits of Pertinax, and too faithful a subject, to concur in their seditious designs; wherefore escaping out of their hands, he fled, first to the emperor, and then out of the city. They then nominated one Falco, another senator; whom the senate would have ordered for execution, had not Pertinax interposed, who declared that during his reign no senator should suffer death.

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Is murdered by the prætorian soldiers.

The prætorian soldiers then resolved unanimously not to use any secret conspiracies, or private contrivances, but boldly to seize upon the emperor and empire at once. They accordingly, in a tumultuous manner, marched through the streets of Rome, and entered the palace without opposition. Such was the terror at their approach, that the greatest part of the emperor's attendants forsook him; while those who remained earnest-

ly intreated him to fly to the body of the people, and interest them in his defence. However, he rejected their advice; declaring, that it was unworthy his imperial dignity, and all his past actions, to save himself by flight. Having thus resolved to face the rebels, he had some hopes that his presence alone would terrify and confound them. But what could his former virtues, or the dignity of command, avail against a tumultuous rabble, nursed up in vice, and ministers of former tyranny? One Thausius, a Tungrian, struck him with his lance on the breast, crying out, "The soldiers send you this." Pertinax finding all was over, covered his head with his robe, and sunk down, mangled with a multitude of wounds, which he received from various assassins. Eclectus, and some more of his attendants, who attempted to defend him, were also slain: his son and daughter only escaped, who happened to be lodged out of the palace. Thus, after a reign of three months, Pertinax fell a sacrifice to the licentious fury of the prætorian army. From the number of his adventures, he was called the *tennis-ball of Fortune*; and certainly no man ever experienced such a variety of situations with so blameless a character.

The soldiers having committed this outrage, retired with great precipitation; and getting out of the city to the rest of their companions, expeditiously fortified their camp, expecting to be attacked by the citizens. Two days having passed without any attempt of this kind, they became more insolent; and willing to make use of the power of which they found themselves possessed, made proclamation, that they would sell the empire to whoever would purchase it at the highest price. In consequence of this proclamation, so odious and unjust, only two bidders were found; namely, Sulpicianus and Didius Julianus: The former, a consular person, præfect of the city, and son-in-law to the late emperor Pertinax; the latter, a consular person likewise, a great lawyer, and the wealthiest man in the city. He was sitting with some friends at dinner when the proclamation was published; and being charmed with the prospect of unbounded power, immediately rose from table and hastened to the camp. Sulpicianus was got there before him; but as he had rather promises than treasure to bestow, the offers of Didius, who produced immense sums of ready money, prevailed. He was received into the camp by a ladder, and they instantly swore to obey him as emperor. From the camp he was attended by his new electors into the city; the whole body of his guards, which consisted of 10,000 men, ranged around him in such order as if they had prepared for battle, and not for a peaceful ceremony. The citizens, however, refused to confirm his election; but rather cursed him as he passed. Upon being conducted to the senate-house, he addressed the few senators that were present in a very laconic speech: "Fathers, you want an emperor; and I am the fittest person you can choose." But even this, short as it seems, was unnecessary, since the senate had it not in their power to refuse their approbation. His speech being backed by the army, to whom he had given about a million of our money, succeeded. The choice of the soldiers was confirmed by the senate, and Didius was acknowledged emperor, now in the 57th year of his age.

It should seem by this weak monarch's conduct when seated

Rome.

371

The empire exposed to sale, and bought by Didius Julianus.

Rome. seated on the throne, that he thought the government of an empire rather a pleasure than a toil. Instead of attempting to gain the hearts of his subjects, he gave himself up to ease and inactivity, utterly regardless of the duties of his station. He was mild and gentle indeed; neither injuring any nor expecting to be injured. But that avarice, by which he became opulent, still followed him in his exaltation; so that the very soldiers who elected him, soon began to detest him for those qualities, so very opposite to a military character. The people also, against whose consent he was chosen, were no less inimical. Whenever he issued from his palace, they openly poured forth their imprecations against him; crying out, that he was a thief, and had stolen the empire. Didius, however, in the true spirit of a trader, patiently bore it all; sometimes beckoning them with smiles to approach him, and testifying his regard by every kind of submission.

372
Pescennius
Niger and
Septimius
Severus as-
sume the
empire.

While Didius was thus contemptuously treated at home, two valiant generals, in different parts of the empire, disclaimed his authority, and boldly resolved to attempt the throne for themselves. These were, Pescennius Niger, governor of Syria; and Septimius Severus, commander of the German legions. Niger was beloved by the people for his clemency and valour; and the report of his proposing Pertinax for his model, and resolving to revenge his death, gained him universal esteem among the people. Being thus apprised of their inclinations, he easily induced his army in Syria to proclaim him emperor; and his title was, shortly after, acknowledged by all the kings and potentates in Asia, who sent their ambassadors to him as their lawful prince. The pleasure of being thus treated as a monarch, in some measure retarded his endeavours to secure his title. Entirely satisfied with the homage of those about him, he neglected the opportunities of suppressing his rivals; and gave himself up to luxury and feasting at Antioch. The conduct of Severus, an African by birth, was very different. Being proclaimed by his army, he began by promising to revenge the death of Pertinax, and took upon him his name. He next secured the fidelity of all the strong places in his province; and then resolved, with the utmost expedition, to march with his whole force directly to Rome.

373
Julianus
deposed
and put to
death.

In the mean time, Didius, who disregarded the attempts of Niger, was greatly alarmed at those of Severus. He first, with many solicitations, procured the senate to proclaim him a traitor. He then applied himself to make the necessary provisions to oppose him, in which he found nothing but disappointment. The cohorts that elected him were enervated by vice and luxury; the people detested his cause; and the cities of Italy had long been disused to the arts of war. Some advised him to march forward, and meet Severus as he was crossing the Alps; others were for sending the generals upon that expedition. The unfortunate Didius, unequal to the task of empire, and quite confounded with the multiplicity of counsels, could take no other resolution but that of awaiting his rival's coming at Rome. Accordingly, soon after being informed of his approach, he obtained the consent of the senate to send his ambassadors, offering to make him a partner of the empire. But Severus rejected this offer, conscious of his own strength, and of the weakness of the proposer. The senate soon appeared of the same sentiments; and

perceiving the timidity and weakness of their present master, began to abandon him, alleging, that he who could not defend the empire was not worthy to govern it. Didius vainly endeavoured to reduce them to their duty, first by intreaties, and then by threats; but these only served to hasten his destruction. The senate being called together, as was formerly practised in the times of the commonwealth by the consuls, they unanimously decreed, That Didius should be deprived of the empire, and that Severus should be proclaimed in his stead. They then commanded Didius to be slain; and sent messengers for this purpose to the palace, where they found him disarmed, and weeping among a few friends that still adhered to his interest. When the executioners began to prepare for their fatal errand, he expostulated with them, demanding what crime he had committed? He could not be persuaded to think, that paying his money, and receiving an empire in exchange, deserved so severe a punishment. The executioners, however, were neither able nor willing to enter into the merits of the cause; they presently led him into the secret baths of the palace, and obliging him to stretch his neck forwards, after the manner of condemned criminals, struck off his head, and placed it up in those courts where he had formerly pleaded with great success.

The senate having thus dispatched Didius, sent ambassadors to Severus, yielding him obedience, granting him the ensigns and the usual titles of empire, and informing him of the death of Didius. Severus, who was now about 47 years of age, received them with all proper respect; and entertaining them honourably continued his march towards Rome. As he came near the city, his first exertion of power was, to have all the prætorian soldiers who had lately sold the empire come forth unarmed to meet him. These, though sensible of their danger, had no other resource left but compliance; and accordingly came forward with branches of laurel, as if to welcome his approach. Severus, however, soon showed how little capable their present submission was to atone for their past offences: after upbraiding them, in a short speech, with all their crimes, he commanded them to be instantly stripped of their military habits, deprived of the name and honour of soldiers, and banished 100 miles from Rome. He then entered the city in a military manner, took possession of the palace, and promised the senate to conduct himself with clemency and justice. However, though he united great vigour with the most refined policy, yet his African cunning was considered as a particular defect in him. He is celebrated for his wit, learning, and prudence; but equally blamed for infidelity and cruelty. In short, he seemed alike disposed to the performance of the greatest acts of virtue and the most bloody severities. He began his command, by seizing all the children of such as had employments or authority in the east, and detained them as pledges for their fathers' loyalty. He next supplied the city with corn; and then with all possible expedition marched against Niger, who was still considered and honoured as emperor of the east.

One of the chief obstacles to his march was, the leaving behind him Clodius Albinus, commander of the legions in Britain, whom he by all means wished to secure in his interests. For this end, he endeavoured to

Rome.

374

Severus de-
clared em-
peror.

374

Niger de-
clared and
killed.

Rome.

prevail upon him, by giving him hopes of succeeding to the empire; insinuating, that he himself was declining, and his children were as yet but infants. To deceive him still farther, he wrote in the same style to the senate, gave him the title of *Cæsar*, and ordered money to be coined with his image. These artifices serving to lull Albinus into false security, Severus marched against Niger with all his forces. After some undecisive conflicts, the last great battle that was fought between these extraordinary men was upon the plains of Issus, on the very spot where Alexander had formerly conquered Darius. Besides the two great armies drawn up on the plain, the neighbouring mountains were covered with infinite numbers of people, who were merely led by curiosity to become spectators of an engagement that was to determine the empire of the world. Severus was conqueror; and Niger's head being struck off by some soldiers of the conquering army, was insultingly carried through the camp on the point of a lance.

This victory secured Severus in the possession of the throne. However, the Parthians, Persians, and some other neighbouring nations, took up arms, under a pretence of vindicating Niger's cause. The emperor marched against them in person, had many engagements with them, and obtained such signal victories over them, as enlarged the empire, and established peace in the east.

375
Albinus
defeated
and de-
stroyed.

Niger being no more, Severus now turned his views against Albinus, whom he resolved by every means to destroy. For this purpose he sent assassins into Britain, under a pretence of bringing him letters, but in reality to dispatch him. Albinus being apprised of their designs, prevented their attempt by recurring to open force and proclaiming himself emperor. Nor was he without a powerful army to support his pretensions; of which Severus being sensible, bent his whole force to oppose him. From the east he continued his course across the straits of Byzantium, into the most western parts of Europe, without intermission. Albinus being informed of his approach, went over to meet him with his forces into Gaul; so that the campaign on both sides was carried on with great vigour. Fortune seemed for a while variable; but at last a decisive engagement came on, which was one of the most desperate recorded in the Roman history. It lasted from morning till night, without any seeming advantage on either side; at length the troops of Severus began to fly, and he himself happening to fall from his horse, the army of Albinus cried out, Victory. But the engagement was soon renewed with vigour by Lætus, one of Severus's commanders, who came up with a body of reserve, designing to destroy both parties and make himself emperor. This attempt, though designed against both, turned out entirely to the advantage of Severus. He therefore again charged with such fury and exactness, that he soon plucked the victory from those who but a short time before seemed conquerors; and pursuing them into the city of Lyons, took Albinus prisoner, and cut off his head; treating his dead body with insults that could only flow from a mean and revengeful temper. All the senators who were slain in battle he ordered to be quartered, and such as were taken alive were immediately executed.

Having thus secured himself in possession of the empire, upon his return to Rome he loaded his soldiers with

rewards and honours; giving them such privileges as strengthened his own power, while they destroyed that of the state. For the soldiers, who had hitherto showed the strongest inclination to an abuse of power, were now made arbiters of the fate of emperors; and we shall henceforward behold them setting them up, and de-throning them, at pleasure.

Being thus secure of his army, he resolved to give way to his natural turn for conquest, and to oppose his arms against the Parthians, who were then invading the frontiers of the empire. Having therefore previously given the government of domestic policy to one Plautianus, a particular favourite of his, to whose daughter he married his son Caracalla, he set out for the east, and prosecuted the war with his usual expedition and success. He forced submission from the king of Armenia, destroyed several cities in Arabia Felix, landed on the Parthian coasts, took and plundered the famous city Ctesiphon, marched back through Palestine and Egypt, and at length returned to Rome in triumph.

During this interval, Plautianus, who was left to direct the affairs of Rome, began to think of aspiring to the empire himself. Upon the emperor's return, he employed a tribune of the prætorian cohorts, of which he was the commander, to assassinate him, as likewise his son Caracalla. The tribune seemed cheerfully to undertake this dangerous office; but instead of going through with it, informed Severus of his favourite's treachery. He at first received it as an improbable story, and as the artifice of some one who envied his favourite's fortune. However, he was at last persuaded to permit the tribune to conduct Plautianus to the emperor's apartments. With this intent, the tribune went and amused him with a pretended account of his killing the emperor and his son, desiring him, if he thought it fit to see them dead, to come with him to the palace. As Plautianus ardently desired their deaths, he readily gave credit to this relation; and following the tribune, he was conducted at midnight into the innermost recesses of the palace. But what must have been his disappointment, when, instead of finding the emperor lying dead, as he expected, he beheld the room lighted up with torches, and Severus, surrounded by his friends, prepared in array to receive him. Being asked by the emperor, with a stern countenance, what had brought him there at that unseasonable time? he was at first utterly confounded; wherefore, not knowing what excuse to make, he ingenuously confessed the whole, intreating forgiveness for what he had intended. The emperor seemed in the beginning inclined to pardon; but Caracalla his son, who from the earliest age showed a disposition to cruelty, spurned him away in the midst of his supplications, and with his sword ran him through the body.

Severus having escaped this danger, spent a considerable time in visiting some cities in Italy, permitting none of his officers to sell places of trust or dignity, and distributing justice with the strictest impartiality. He took such an exact order in managing his exchequer, that, notwithstanding his great expences, he left more money behind him than any of his predecessors. His armies also were kept upon the most respectable footing; so that he feared no invasion. Being equally attentive to the preservation of all parts of the empire, he resolved to make his last expedition into Britain, where

Rome.

Rome.
376
Expedition
of Severus
into Bri-
tain.

where the Romans were in danger of being destroyed, or compelled to fly the province. Wherefore, after appointing his two sons Caracalla and Geta joint successors in the empire, and taking them with him, he landed in Britain, to the great terror of such as had drawn down his resentment. Upon his progress into the country, he left his son Geta in the southern part of the province, which had continued in obedience, and marched with his son Caracalla against the Caledonians. In this expedition, his army suffered prodigious hardships in pursuing the enemy; they were obliged to hew their way through intricate forests, to drain extensive marshes, and form bridges over rapid rivers; so that he lost 50,000 men by fatigue and sickness. However, he supported all these inconveniences with the greatest bravery; and is said to have prosecuted his successes with such vigour, that he compelled the enemy to sue for peace; which they obtained, not without the surrender of a considerable part of their country. We must here observe, however, that the Picts and Caledonians are so often confounded together by historians, that many mistakes have thence arisen concerning the progress and conquests of the Romans in the north of Britain. But from the boundary formed by the famous wall of Severus (see *SEVERUS'S WALL*), we must conclude, that no part of Caledonia, properly so called, had been either on this or any other occasion ceded to him; and there is reason to believe, that he rather received checks from the people of that territory, than was ever able to make any considerable impression upon them. Be this, however, as it may, after having made peace, and built his wall, he retired to York; where, partly through age and fatigue, and partly through grief at the irreclaimable life of Caracalla, he found himself daily declining, having already lost the use of his feet. To add to the distress of his situation, he was informed that the soldiers had revolted, and declared his son emperor. In this exigence, he seemed once more to recall his natural vigour; he got himself immediately put into his litter, and commanded the new emperor, with the tribunes and centurions, to be brought before him. Though all were willing to court the favour of the young emperor, such was the authority of Severus, that none dared to disobey. They appeared before him confounded and trembling, and implored pardon upon their knees. Upon which, putting his hand to his head, he cried out, "Know, that it is the head that governs, and not the feet." However, soon perceiving his disorder to increase, and knowing that he could not outlive it, he called for poison; which being refused him, he loaded his stomach with food; which not being able to digest, it soon brought him to his end, in the 56th year of his age, after an active though cruel reign of about 18 years.

377
Severus
dies.

378
Caracalla
and Geta
succeed.

Caracalla and Geta being acknowledged as emperors by the army, began to show a mutual hatred to each other even before their arrival at Rome. Their only agreement was, in resolving to deify Severus their father; but soon after, each sought to attach the senate and army to his own particular interest. They were of very opposite dispositions: Caracalla was fierce and cruel to an extreme degree; Geta was mild and merciful; so that the city soon found the dangerous effects of being governed by two princes of equal power and contrary inclinations.

But this opposition was of no long continuance; for Caracalla being resolved to govern alone, furiously entered Geta's apartment, and, followed by ruffians, slew him in his mother's arms. Having committed this detestable murder, he issued with great haste from the palace, crying out, That his brother would have slain him; and that he was obliged, in self-defence, to retaliate the intended injury. He then took refuge among the prætorian cohorts, and in a pathetic tone began to implore their assistance, still making the same excuse for his conduct. To this he added a much more prevailing argument, promising to bestow upon them the largesses usually given upon the election of new emperors, and distributing among them almost all the treasures which had been amassed by his father. By such persuasives the soldiers did not hesitate to proclaim him sole emperor, and to stigmatize the memory of his brother Geta as a traitor and an enemy to the commonwealth. The senators were soon after induced, either through favour or fear, to approve what had been done by the army: Caracalla wept for the death of his brother whom he had slain; and, to carry his hypocrisy to the utmost extreme, ordered him to be adored as a god.

Being now emperor, he went on to mark his course with blood. Whatever was done by Domitian or Nero fell short of this monster's barbarities. Lætus, who first advised him to murder his brother, was the first who fell a sacrifice to his jealousy. His own wife Plautina followed. Papinian, the renowned civilian, was beheaded for refusing to write in vindication of his cruelty; answering the emperor's request, by observing, That it was much easier to commit a parricide than to defend it. He commanded all governors to be slain that his brother had appointed; and destroyed not less than 2000 persons who had adhered to his party. Whole nights were spent in the execution of his bloody decrees; and the dead bodies of people of all ranks were carried out of the city in carts, where they were burnt in heaps, without any of the ceremonies of a funeral. Upon a certain occasion, he ordered his soldiers to set upon a crowded audience in the theatre, only for discountenancing a charioteer whom he happened to favour. Perceiving himself hated by the people, he publicly said, that he could insure his own safety though not their love; so that he neither valued their reproaches nor feared their hatred.

This safety which he so much built upon was placed in the protection of his soldiers. He had exhausted the treasury, drained the provinces, and committed a thousand acts of rapacity, merely to keep them steadfast in his interests; and being disposed to trust himself with them particularly, he resolved to lead them upon a visit through all the provinces of the empire. He first went into Germany; where, to oblige the natives, he dressed himself in the habit of their country. From thence he travelled into Macedonia, where he pretended to be a great admirer of Alexander the Great; and among other extravagancies caused a statue of that monarch to be made with two faces; one of which resembled Alexander and the other himself. He was so corrupted by flattery, that he called himself *Alexander*; walked as he was told that monarch had walked; and, like him, bent his head to one shoulder. Shortly after, arriving at Lesser Asia and the ruins of Troy, as he

Rome.
379
Geta murdered by
Caracalla.

380
Who proves
a most
bloody ty-
rant.

381
His extra-
vagant fol-
ly, cruelty,
and trea-
chery.

Rome. was viewing the tomb of Achilles, he took it into his head to resemble that hero; and one of his freedmen happening to die at that time, he used the same ceremonies that were performed at the tomb of Patroclus. Passing thence into Egypt, he massacred in the most terrible manner the inhabitants of Alexandria, on account of the satires they composed on him, as is related under the article ALEXANDRIA.

Going from thence into Syria, he invited Artabanus king of Parthia to a conference; desiring his daughter in marriage, and promising him the most honourable protection. In consequence of this, that king met him on a spacious plain, unarmed, and only attended with a vast concourse of his nobles. This was what Caracalla desired. Regardless of his promise, or the law of nations, he instantly surrounded him with armed troops, let in wild beasts among his attendants, and made a most terrible slaughter among them; Artabanus himself escaping with the utmost difficulty. For this vile treachery he obtained from the senate the surname of *Parthicus*.

³⁸² *Marcius his father's wife.* Upon his return towards Rome, it would seem as if his vices were inexhaustible; for having been guilty of parricide, he now resolved to marry the mother of Geta whom he had slain. It happened that one day seeing her drop her veil, which disclosed her naked bosom, which was extremely beautiful, he told her, that he would possess those charms he beheld, if it were lawful. To this unnatural request she hesitated not to answer, that he might enjoy all things who possessed all. Whereupon, setting aside all duty and respect for his deceased father, he celebrated his nuptials with her in public, totally disregarding the censures and the sarcasms of mankind.

However, though he disregarded shame, he was not insensible to fear. He was ever uneasy in the consciousness of being universally hated; and was continually consulting astrologers concerning what death he should die. Among others, he sent one of his confidants, named *Maternianus*, with orders to consult all the astrologers in the city concerning his end. *Maternianus* considered this as a proper time to get rid of *Macrinus*, the emperor's principal commander in Mesopotamia; a man who was daily supplanting him in his master's favour. He therefore informed him by letter, as if from the astrologers, that *Macrinus* had a design against his life; and they consequently advised him to put the conspirator to death. This letter was sent sealed, and made up, amongst many others, to be conveyed with the greater secrecy, and delivered to the emperor as he was preparing for a chariot race. However, as it never was his custom to interrupt his pleasures for his business, he gave the packet to *Macrinus* to read over, and to inform him of the contents when more at leisure. In perusing these letters, when *Macrinus* came to that which regarded himself, he was unable to contain his surprise and terror. His first care was, to reserve the letter in question to himself, and to acquaint the emperor only with the substance of the rest. He then set about the most probable means of compassing his death, by which alone he could expect any safety. At length he determined to apply to one *Martialis*, a man of great strength, and a centurion of the guards, who hated the emperor from various motives; particularly for the death of a brother, whom *Caracalla* had ordered

to be slain. Him therefore *Macrinus* exhorted to revenge his brother's death, by killing the tyrant, which he might easily effect, as being always so near his person. *Martialis* readily undertook the dangerous task; being willing to meet death himself, so he might obtain his desire of seeing the tyrant expire before him. Accordingly, as the emperor was riding out one day near a little city called *Carra*, he happened to withdraw himself privately, upon a natural occasion, with only one page to hold his horse. This was the opportunity *Martialis* had so long and ardently desired; wherefore running to him as if he had been called, he stabbed the emperor in the back, so that he died immediately. *Martialis* unconcernedly returned to his troop; but retiring by insensible degrees, he endeavoured to secure himself by flight. But his companions soon missing him, and the page giving information of what had been done, he was pursued by the German horse and cut in pieces.

During the reign of this execrable tyrant, which continued six years, the empire was every day declining; the soldiers were entirely masters of every election; and as there were various armies in different parts, so there were as many interests all opposite to each other. *Caracalla*, by satisfying their most unreasonable appetites, destroyed all discipline among them, and all subordination in the state.

The soldiers, now without an emperor, after a suspense of two days, fixed upon *Macrinus*, who took all possible methods to conceal his being privy to *Caracalla's* murder. The senate confirmed their choice shortly after; and likewise that of his son *Diadamenus*, whom he took as a partner in the empire. *Macrinus* was 53 years old when he entered upon the government of the empire. He was of obscure parentage; some say by birth a Moor, who by the mere rotation of office, being first made præfect of the prætorian bands, was now, by treason and accident, called to fill the throne. We are told but little of this emperor, except his engaging in a bloody though undecided battle with *Artabanus* king of Parthia, who came to take vengeance for the injury he had sustained in the late reign: however, this monarch finding his real enemy dead, was content to make peace, and returned into Parthia. Something is also said of the severity of this emperor's discipline; for to such a pitch of licentiousness was the Roman army now arrived, that the most severe punishments were unable to restrain the soldiers; and yet the most gentle inflictions were looked upon as severity. It was this rigorous discipline, together with the artifices of *Mæsa*, grandmother to *Heliogabalus* the natural son of *Caracalla*, that caused the emperor's ruin. *Heliogabalus* was priest of a temple dedicated to the Sun, in *Emesa*, a city of Phœnicia; and though but 14 years old was greatly loved by the army for the beauty of his person, and the memory of his father, whom they still considered as their greatest benefactor. This was soon perceived by the grandmother; who being very rich in gold and jewels, gave liberal presents among them, while they frequently repaired to the temple, both from the garrison in the city and the camp of *Macrinus*. This intercourse growing every day more frequent, the soldiers, being disgusted with the severities of their present emperor, began to think of placing *Heliogabalus* in his stead. Accordingly, sending for him

Rome.

383

He is murdered.

383

Macrinus succeeded.

384

Heliogabalus revolted against him.

Rome. to their camp, he was immediately proclaimed; and such were the hopes of his virtues, that all men began to affect his interests.

385
Macrinus
defeated,
and put to
death.

Macrinus, who at this time was pursuing his pleasures at Antioch, gave but little attention to the first report; only sending his lieutenant Julian, with some legions, to quell the insurrection. However, these, like the rest, soon declared for Heliogabalus, and slew their general. It was then that Macrinus found he had treated the rebellion too slightly; he therefore resolved, with his son, to march directly against the seditious legions, and force them to their duty. Both parties met on the confines of Syria: the battle was for some time furious and obstinate; but at last Macrinus was overthrown, and obliged to seek safety by flight. His principal aim was to get to Rome, where he knew his presence was desired; wherefore he travelled through the provinces of Asia Minor with the utmost expedition and privacy, but unfortunately fell sick at the city of Chalcedon. There those who were sent in pursuit, overtook and put him to death, together with his son Diadumenus, after a short reign of one year and two months.

386
Heliogabalus worse
than any of
his predecessors.

The senate and citizens of Rome being obliged to submit to the appointment of the army as usual, Heliogabalus ascended the throne at the age of 14. One at so early an age, invested with unlimited power, and surrounded with flatterers, could be expected to act only as they thought proper to direct. This young emperor was entirely led by them; and being sensible that it was in his power to indulge all his appetites, he studied only their gratification. As he is described by historians, he appears a monster of sensuality. His short life therefore is but a tissue of effeminacy, lust, and extravagance. He married, in the small space of four years, six wives, and divorced them all. He built a temple to the sun; and willing that his god should have a wife as well as himself, he married him to Pallas, and shortly after to the moon. His palace was a place of rendezvous for all the prostitutes of Rome, whom he frequently met naked, calling them *his fellow soldiers, and companions in the field*. He was so fond of the sex, that he carried his mother with him to the senate-house, and demanded that she should always be present when matters of importance were debated. He even went so far as to build a senate-house for women, with suitable orders, habits, and distinctions, of which his mother was made president. They met several times; all their debates turning upon the fashions of the day, and the different formalities to be used in giving and receiving visits. To these follies, he added great cruelty and boundless prodigality; so that he was heard to say, that such dishes as were cheaply obtained were scarce worth eating. His suppers therefore generally cost 6000 crowns, and often 60,000. He was always dressed in cloth of gold and purple, enriched with precious stones, and yet never wore the same habit twice. His palace, his chambers, and his beds, were all furnished of the richest stuffs, covered with gold and jewels. Whenever he took horse, all the way between his apartment and the place of mounting was covered with gold and silver dust strewn at his approach.

These excesses were soon perceived by his grandmother Mæsa, whose intrigues had first raised him to the throne; so that she thought to lessen his power by di-

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viding it. For this purpose, under a pretence of freeing him from the cares of public business, she persuaded him to adopt his cousin-german, Alexander, as his successor; and likewise to make him his partner in the consulship. Heliogabalus, having thus raised his cousin, had scarce given him his power, when he wished again to take it away; but the virtues of this young prince had so greatly endeared the people and the army to him, that the attempt had like to have been fatal to the tyrant himself. The prætorian soldiers mutinying, attempted to kill him as he was walking in his gardens; but he escaped, by hiding himself from their fury. However, upon returning to their camp, they continued the sedition; requiring that the emperor should remove such persons from about him as oppressed the subject, and contributed to contaminate him. They required also the being permitted to guard the young prince themselves, and that none of the emperor's favourites or familiars should ever be permitted to converse with him. Heliogabalus was reluctantly obliged to comply; and conscious of the danger he was in, made preparations for death, when it should arrive, in a manner truly whimsical and peculiar. He built a lofty tower with steps of gold and pearl, from whence to throw himself headlong in case of necessity. He also prepared cords of purple silk and gold to strangle himself with; he provided golden swords and daggers to stab himself with; and poison to be kept in boxes of emerald, in order to obtain what death he chose best. Thus fearing all things, but particularly suspicious of the designs of the senate, he banished them all out of the city: he next attempted to poison Alexander, and spread a report of his death; but perceiving the soldiers begin to mutiny, he immediately took him in his chariot to the camp, where he experienced a fresh mortification, by finding all the acclamations of the army directed only to his successor. This not a little raised his indignation, and excited his desire of revenge. He returned towards the city, threatening the most severe punishments against those who had displeased him, and meditating fresh cruelties. However, the soldiers were unwilling to give him time to put his designs in execution: they followed him directly to his palace, pursued him from apartment to apartment, and at last found him concealed in a privy; a situation very different from that in which he expected to die. Having dragged him from thence through the streets, with the most bitter invectives, and having dispatched him, they attempted once more to squeeze his pampered body into a privy; but not easily effecting this, they threw it into the Tiber, with heavy weights, that none might afterwards find or give it burial. This was the miserable and ignominious death of Heliogabalus, in the 18th year of his age, after a detestable reign of four years. His mother also was slain at the same time by the soldiers; as were also many of the opprobrious associates of his criminal pleasures.

Alexander being, without opposition, declared emperor, the senate, in their usual method of adulation, were for conferring new titles upon him; but he modestly declined them all, alleging, that titles were only honourable when given to virtue, not to station. This outset was an happy omen of his future virtues; and few princes in history have been more commended by his contemporaries, or indeed more deserved commendation.

3 K

Rome.

387
Adopts Alexander,
and takes him for his
colleague.

388
Is murdered by the soldiers.

389

Virtues of Alexander.

Rome. tion. To the most rigid justice he added the greatest humanity. He loved the good, and was a severe reprover of the lewd and infamous. His accomplishments were equal to his virtues. He was an excellent mathematician, geometrician, and musician; he was equally skilled in painting and sculpture; and in poetry few of his time could equal him. In short, such were his talents, and such the solidity of his judgment, that though but 16 years of age, he was considered as a wise old man.

The first part of his reign was spent in a reformation of the abuses of his predecessor. He restored the senators to their rank; nothing being undertaken without the most sage advisers, and most mature deliberation. Among the number of his advisers was his mother Mammæa; a woman eminent for her virtues and accomplishments, and who made use of her power as well to secure her son the affections of his subjects, as to procure them the most just administration. He was a rigid punisher of such magistrates as took bribes, saying, That it was not enough to deprive such of their places; for their trusts being great, their lives, in most cases, ought to pay for a breach of them. On the contrary, he thought he could never sufficiently reward such as had been remarkable for their justice and integrity, keeping a register of their names, and sometimes asking such of them as appeared modest and unwilling to approach him, why they were so backward in demanding their reward, and why they suffered him to be in their debt? His clemency extended even to the Christians, who had been punished in the former reigns with unrelenting barbarity. Upon a contest between them and a company of cooks and vintners, about a piece of public ground, which the one claimed as a place for public worship, and the other for exercising their respective trades, he decided the point by his rescript, in these words: "It is better that God be worshipped there in any manner, than that the place should be put to uses of drunkenness and debauchery."

390
Restores
the affairs
of the em-
pire.

His abilities in war were not inferior to his assiduity in peace. The empire, which from the remissness and debauchery of the preceding reigns now began to be attacked on every side, wanted a person of vigour and conduct to defend it. Alexander faced the enemy wherever the invasion was most formidable, and for a short time deferred its ruin. His first expedition, in the tenth year of his reign, was against the Parthians and Persians, whom he opposed with a powerful army.—The Persians were routed in a decisive engagement with great slaughter; the cities of Ctesiphon and Babylon were once more taken, and the Roman empire was restored to its former limits. Upon his return to Antioch, his mother Mammæa sent for the famous Origen, to be instructed by him in the principles of Christianity; and after discoursing with him for some time upon the subject, dismissed him, with a proper safeguard, to his native city of Alexandria. About the same time that Alexander was victorious in the East, Furius Celsus, his general, obtained a signal victory over the Mauritanians in Africa. Varius Macrinus was successful in Germany, and Junius Palmatus returned with conquest from Armenia. However, the number of these victories only hastened the decline of the empire, which was waited by the exertion of its own

strength, and was now becoming little more than a splendid ruin.

About the 13th year of his reign, the Upper Germans, and other northern nations, began to pour down immense swarms of people upon the more southern parts of the empire. They passed the Rhine and the Danube with such fury, that all Italy was thrown into the most extreme consternation. The emperor, ever ready to expose himself for the safety of his people, made what levies he could, and went in person to stem the torrent; which he speedily effected. It was in the course of his successes against the enemy, that he was cut off by a mutiny among his soldiers. The legions encamped about Moguntia, having been abominably corrupted during the reign of Heliogabalus, and trained up in all kinds of rapine and disobedience, required the most strict command. Alexander could neither endure their tumultuary obedience, nor they his regular discipline. His own faults, and those of his mother Mammæa, were objected against him. They openly exclaimed, That they were governed by an avaricious woman, and a mean-spirited boy; and resolved upon electing an emperor capable of ruling alone. In this general revolt, Maximinus, an old and experienced commander, held frequent conferences with the soldiers, and enflamed the sedition. At length, being determined to dispatch their present emperor, they sent an executioner into his tent; who immediately struck off his head, and, shortly after, that of his mother. He died in the 29th year of his age, after a prosperous reign of thirteen years and nine days.

391
is murder-

The tumults occasioned by the death of Alexander being appeased, Maximinus, who had been the chief promoter of the sedition, was chosen emperor. This extraordinary man, whose character deserves particular attention, was born of very obscure parentage, being the son of a poor herdsman of Thrace. In the beginning he followed his father's profession, and only exercised his personal courage against the robbers who infested the part of the country in which he lived. Soon after, his ambition increasing, he left his poor employment, and enlisted in the Roman army; where he soon became remarkable for his great strength, discipline, and courage. This gigantic man was no less than eight feet and a half high; he had a body and strength corresponding to his size, being not less remarkable for the magnitude than the symmetry of his person. His wife's bracelet usually served him for a thumb-ring; and his strength was so great, that he was able to draw a carriage which two oxen could not move. He could strike out an horse's teeth with a blow of his fist, and break its thigh with a kick. His diet was as extraordinary as the rest of his endowments; he generally eat 40 pounds weight of flesh every day, and drank six gallons of wine, without committing any debauch in either. With a frame so athletic, he was possessed of a mind undaunted in danger, and neither fearing nor regarding any man. The first time he was made known to the emperor Severus, was upon his celebrating games on the birth-day of his son Geta. Maximinus was then a rude countryman, and requested the emperor to be permitted to contend for the prizes which were distributed to the best runners, wrestlers, and boxers, of the army. Severus, unwilling to infringe the military discipline, would

392
Succeeded
by Maxi-
minus, a
man of gi-
gantic sta-
ture and
extraordi-
nary
strength

Rome. would not permit him at first to combat, except with slaves, against whom his strength appeared astonishing. He overcame 16 in running, one after the other: he then kept up with the emperor on horseback; and having fatigued him in the course, he was opposed to seven of the most active soldiers, and overcame them with the greatest ease. From that time he was particularly noticed, and taken into the emperor's body-guards, in which his assiduity and prompt obedience were particularly remarkable. In the reign of Caracalla, he was made a centurion, and distinguished himself in this station by his strict attention to the morals and discipline of those he commanded. When made a tribune, he still retained the hard simplicity of his life; eat as the meanest centinel; spent whole days in exercising his troops; and would now and then himself wrestle with eight or ten of the strongest men in the army, whom he threw with scarce any effort. Being thus become one of the most remarkable men in the empire, both for courage, discipline, and personal activity, he gave, shortly after, a very high instance of his unshaken fidelity: for when Macrinus was made emperor, he refused to serve under a prince that had betrayed his sovereign; and retired to Thrace, his native country, where he followed commerce, and purchased some lands, content with privacy rather than a guilty dependence. Upon the accession of Heliogabalus to the throne, this bold veteran once more returned to the army; but was, in the very beginning, disgusted at the base effeminacy of the emperor; who, hearing amazing instances of his strength, asked him, if he were equally capable in combats of another nature? This lewd demand was so little suitable to the temper of Maximinus, that he instantly left the court. Upon the death of Heliogabalus, he again returned to Rome, and was received with great kindness by Alexander, who particularly recommended him to the senate, and made him commander of the fourth legion, which consisted of new-raised soldiers. Maximinus gladly accepted of this charge, and performed his duty with great exactness and success, setting an example of virtue and discipline to all the commanders of the army. Nor was his valour less apparent against the Germans, whither he was sent with his legion; so that he was unanimously considered as the boldest, bravest, most valiant, and most virtuous soldier in the whole empire. He soon, however, forfeited all these justly merited titles, when he was raised to the throne; and, from being the most loved commander in the army, he became the most cruel tyrant upon earth. Yet in fact, his former virtues were all of the severe and rigid kind, which, without any education, might very easily degenerate into tyranny; so that he might have mistaken his succeeding cruelty for discipline, and his severity for justice. However this be, Maximinus is considered as one of the greatest monsters of cruelty that ever disgraced power; and, fearful of nothing himself, he seemed to sport with the terrors of all mankind.

393
Becomes a
cruel ty-
rant.

He began his reign, by endeavouring to force obedience from every rank of people, and by vindicating his authority by violence. The senate and people of Rome were the first that incurred his resentment. They utterly refusing to confirm the election of the army, he was the first emperor who reigned without their concurrence or approbation. However, he seem-

ed regardless of their opposition, proceeding to secure his election by putting all such to death as had been raised by his predecessor. The Christians also, having found favour in the former reign, felt the weight of his resentment; and were persecuted in several parts of the empire, particularly in those where he himself resided. His cruelty likewise extended to the rich, whose lives and estates became a frequent sacrifice to avarice and suspicion. But what appears still a more extraordinary instance of his cruelty, being ashamed of the meanness of his extraction, he commanded all such as were best acquainted with him and his parentage to be slain, although there were some among the number that had relieved him in his low condition.

However, his cruelties did not retard his military operations, which were carried on with a spirit becoming a better monarch. He overthrew the Germans in several battles, wasted all their country with fire and sword for 400 miles together, and set a resolution of subduing all the northern nations as far as the ocean. In these expeditions, in order to attach the soldiers more firmly to him, he increased their pay; and in every duty of the camp, he himself took as much pains as the meanest centinel in his army, showing incredible courage and assiduity. In every engagement, where the conflict was hottest, Maximinus was always seen fighting there in person, and destroying all before him: for, being bred a barbarian, he considered it as his duty to combat as a common soldier, while he commanded as a general.

In the mean time, his cruelties had so alienated the minds of his subjects, that several conspiracies were secretly aimed against him. Magnus, a consular person, and some others, had plotted to break down a wooden bridge, as soon as the emperor had passed it, and thus to abandon him to the enemy. But this being discovered, gave Maximinus an opportunity of indulging his natural severity, upon this pretext alone causing above 4000 to be slain. Shortly after, some of Alexander's old soldiers withdrawing themselves from the camp, proclaimed one Quarcianus as emperor, who had been lately disgusted at Maximinus for being dismissed from employment. The soldiers, in fact, constrained him to accept of the dangerous superiority to which he was exposed: and shortly after, in the spirit of the times, the person who had been the promoter of his advancement, murdered him in his bed, and carried his head to Maximinus; who received him kindly at first, but soon put him to a cruel death, for his complicated guilt of treason and treachery.

These partial insurrections were soon after followed by a spirit of general discontent throughout all the empire. The provinces of Africa were the first that showed their detestation of the tyrant, whose extortions and cruelties among them were become insupportable. They first slew his procurator; and afterwards considering how dangerous a crime they had committed, they resolved to throw off all expectations of pardon, and create a new emperor. Gordian was then proconsul of Africa, a person of great fame for his virtues, and highly revered for a blameless life of near 80. Him, therefore, they determined to elect; and accordingly the soldiers and natives assembling together, tumultuously entered his house, resolved to put their design in execution. Gordian, who at first supposed

Rome.

394
His success
in war.

395
Conspira-
cies formed
against him.

396
Gordian
proclaimed
emperor.

Rome

they were come to kill him, being made sensible of their intentions, utterly refused their offer, alleging his extreme age, and Maximinus's power. But all his opposition was vain: they constrained him to accept of the proffered dignity; and he, with his son Gordian, who was 46 years of age, were declared emperors. Being thus raised contrary to his inclination, the old man immediately wrote to the senate, declaring that he had unwillingly accepted of the empire, and would only keep his authority till he had freed it from the tyranny of its present oppressor. The senate very joyfully confirmed his election, adjudging Maximinus as an enemy and traitor to the state. The citizens also showed an equal zeal in the cause: they flew upon such as were the reputed friends of Maximinus, and tore them in pieces; even some who were innocent falling a sacrifice to the multitude's blind rage. So great an alteration being made in the city against the interests of Maximinus, the senate were resolved to drive the opposition to the extreme; and accordingly made all necessary preparations for their security, ordering Maximinus's governors to be displaced, and commanding all the provinces to acknowledge Gordian for emperor. This order was differently received in different parts, as people were affected to one or the other party: in some provinces the governors were slain; in others, the messengers of the senate; so that all parts of the empire felt the consequences of the civil war.

397
Rage of
Maximinus
on hearing
the news.

In the mean time, when Maximinus was informed of these charges against him, his rage appeared ungovernable. He roared like a savage beast, and violently struck his head against the wall, showing every instance of ungovernable distraction. At length his fury being somewhat subsided, he called his whole army together; and, in a set speech, exhorted them to revenge his cause, giving them the strongest assurances that they should possess the estates of all such as had offended. The soldiers unanimously promised to be faithful; they received his harangue with their usual acclamations; and, thus encouraged, he led them towards Rome, breathing nothing but slaughter and revenge. However, he found many obstacles to his impetuosity; and, though he desired nothing so much as dispatch, his marches were incommodious and slow. The tumultuous and disobedient armies of the empire were at present very different from the legions that were led on by Sylla or Cæsar; they were loaded with baggage, and followed by slaves and women, rather resembling an eastern caravan, than a military battalion. To these inconveniences also was added the hatred of the cities through which he passed, the inhabitants all abandoning their houses upon his approach, and securing their provisions in proper hiding-places. However, in this complication of inconveniences and misfortunes, his affairs began to wear a favourable appearance in Africa: for Capelianus, the governor of Numidia, raised a body of troops in his favour, and marched against Gordian, towards Carthage; where he fought the younger Gordian, slew him, and destroyed his army. The father, hearing of the death of his son, together with the loss of the battle, strangled himself in his own girdle. Capelianus pursuing his victory, entered Carthage; where he gave a loose to pillage and slaughter, under a pretence of revenging the cause of Maximinus. The news of

398
Gordian
defeated
and killed.

these successes was soon brought to the emperor, who now increased his diligence, and flattered himself with a speedy opportunity of revenge. He led on his large army by hasty journeys into Italy, threatening destruction to all his opposers, and ardently wishing for fresh opportunities of slaughter.

Nothing could exceed the consternation of the senate upon the news of this defeat. They now saw themselves not only deprived of the assistance of Gordian and his son, on whom they greatly relied; but also opposed by two formidable tyrants, each commanding a victorious army, directly marching towards Rome, and meditating nothing but vengeance. In this afflicting exigence, they, with great solemnity, met at the temple of Jupiter, and after the most mature deliberations, chose Pupienus and Balbinus emperors conjointly. These were men who had acquired the esteem of the public both in war and peace, having commanded armies, and governed provinces, with great reputation; and being now appointed to oppose Maximinus, they made what levies they could, both in Rome and the country. With these, Pupienus marched to stop the progress of the invaders, leaving the city to a fresh and unlooked for calamity. This was occasioned by two of Maximinus's soldiers, who, entering the senate-house, were slain by two senators. This quickly gave offence to the body of the prætorian soldiers, who instantly resolved to take revenge, but were opposed by the citizens; so that nothing was seen throughout Rome, but tumult, slaughter, and cruelty. In this universal confusion, the calamity was increased by the soldiers setting the city on fire, while the wretched inhabitants were combating each other in the midst of the flames.

Nevertheless, Maximinus himself, in whose favour these seditions were promoted, did not seem to be more fortunate. Upon being informed of the new election of emperors, his fury was again renewed, and he passed the Alps, expecting, upon entering Italy, to refresh his fatigued and famished army in that fertile part of the country. But in this he was entirely disappointed; the senate had taken such care to remove all kinds of sustenance to fortified places, that he still found himself reduced to his former necessities, while his army began to murmur for want. To this another disappointment was added shortly after: for approaching the city of Aquileia, which he expected to enter without any difficulty, he was astonished to find it prepared for the most obstinate resistance, and resolved to hold out a regular siege. This city was well fortified and populous, and the inhabitants greatly averse to Maximinus's government; but what added still more to its strength, it was commanded by two excellent generals, Crispinus and Menophilis, who had so well furnished it with men and ammunition, that Maximinus found no small resistance, even in investing the place. His first attempt was, to take the city by storm; but the besieged threw down such quantities of scalding pitch and sulphur upon his soldiers, that they were unable to continue the assault. He then determined upon a blockade; but the inhabitants were so resolute, that even the old men and children were seen combating upon the walls, while the women cut off their hair to furnish the soldiers with bow-strings. Maximinus's rage at this unexpected opposition was now

Rome.

399
Pupienus
and Balbinus
proclaimed
emperors.

400
Aquileia
besieged by
Maximinus.

Rome. now ungovernable: having no enemy to wreck his resentment upon, he turned it against his own commanders. He put many of his generals to death, as if the city had held out through their neglect or incapacity, while famine made great depredations upon the rest of his army. Nothing now appeared on either side to terminate the contest, except the total destruction of either. But a mutiny in Maximinus's own army a while rescued the declining empire from destruction, and saved the lives of thousands. The soldiers being long harassed by famine and fatigue, and hearing of revolts on every side, resolved to terminate their calamities by the tyrant's death. His great strength, and his being always armed, were, at first, the principal motives to deter any from assassinating him; but at length having made his guards accomplices in their design, they set upon him, while he slept at noon in his tent, and slew both him and his son, whom he had made his partner in the empire, without any opposition, after an usurpation of about three years, and in the 65th year of his age.

401
Is assassinated,

The tyrant being dead, and his body thrown to the dogs and birds of prey, Pupienus and Balbinus continued for some time emperors without opposition. But the prætorian soldiers, who had long been notorious for mutiny and treason, soon resolved on further change. Nor did the dissensions between the new made emperors themselves a little contribute to their downfall: for though both were remarkable for wisdom and age, yet they could not restrain the mutual jealousy of each other's power. Pupienus claimed the superiority from his great experience; while Balbinus was equally aspiring upon account of his family and fortune.

In this ill-judged contest, the prætorian soldiers, who were enemies to both, set upon them in their palace, at a time their guards were amused with seeing the Capitoline games. Pupienus perceiving their tumultuous approach, sent with the utmost speed for assistance from his colleague; but he, out of a culpable suspicion that something was designed only against himself, refused to send such of the German guards as were next his person. Thus the seditious soldiers found an easy access to both the emperors apartments; and dragging them from the palace towards the camp, slew them both, leaving their dead bodies in the streets, as a dreadful instance of their sedition.

402
And like wife Pupienus and Balbinus,

In the midst of this sedition, as the mutineers were proceeding along, they by accident met Gordian, the grandson of him who was slain in Africa, and declared him emperor on the spot. The senate and people had been long reduced to the necessity of suffering their emperors to be nominated by the army; so that all they could do in the present instance was to confirm their choice. This prince was but 16 years old when he began his reign, but his virtues seemed to compensate for his want of experience. His principal aims were, to unite the opposing members of the government, and to reconcile the soldiers and citizens to each other. His learning is said to have been equal to his virtues; and we are assured that he had 62,000 books in his library. His respect for Mithæus, his governor and instructor, was such, that he married his daughter, and profited by his counsels in all the critical circumstances of his reign.

403
Young Gordian proclaimed emperor,

The first four years of this emperor's reign were attended with the utmost prosperity; but in the fifth he was alarmed with accounts from the east, that Sapor, king of Persia, had furiously invaded the confines of the Roman empire, and having taken Antioch, had pillaged Syria and all the adjacent provinces. Besides the Persians, the Goths also invaded the empire on their side, pouring down like an inundation from the north, and attempting to fix their residence in the kingdom of Thrace. To oppose both these invasions, Gordian prepared an army; and having gained some victories over the Goths, whom he obliged to retire, he turned his arms against the Persians, whom he defeated upon several occasions, and forced to return home with disgrace. In gaining these advantages, Mithæus, whom he had made prætorian præfect, had the principal share; but he dying soon after (as it is supposed being poisoned by Philip an Arabian, who was appointed his successor), the fortunes of Gordian seemed to die with him. The army began to be no longer supplied with provisions as usual; murmurs were heard to prevail, and these were artfully fomented by Philip. Things thus proceeding from bad to worse, Philip was at first made his equal in the command of the empire; shortly after, invested with the sole power; and, at length, finding himself capable of perpetrating his long meditated cruelty, Gordian was, by his order, slain, in the 22d year of his age, after a successful reign of near six years.

Rome.
404
His success against the barbarians.

Philip having thus murdered his benefactor, was so fortunate as to be immediately acknowledged emperor by the army. The senate also, though they seemed at first to oppose his power, confirmed his election, and gave him, as usual, the title of *Augustus*. Philip was about 40 years old when he came to the throne; being the son of an obscure Arabian, who had been captain of a band of robbers. Upon his exaltation, he associated his son, a boy of six years of age, as his partner in the empire; and, in order to secure his power at home, made peace with the Persians, and marched his army towards Rome. On his way, having conceived a desire to visit his native country of Arabia, he built there a city called *Philippopolis*; and from thence returning to Rome, he was received as emperor, and treated with all the marks of submission, though not of joy. To put the people in good humour, he caused the secular games to be celebrated, with a magnificence superior to any of his predecessors, it being just 1000 years after the building of the city. Upon occasion of these games, we are told that both Philip and his son were converted to Christianity. However this be, a murderer and an ungrateful usurper does no great honour to whatever opinion he may happen to embrace. We have little account of the latter part of his reign in the wretched and mutilated histories of the times; we only learn, that the Goths having invaded the empire, Marius, Philip's lieutenant, who was sent against them, revolted, and caused himself to be declared emperor. This revolt, however, was but of short duration; for the army which had raised him repented of their rashness, deposed him with equal levity, and put him to death. Decius was the person whom Philip appointed to command in the room of the revolting general. The chief merit of Decius with the emperor

405
Is murdered by Philip, who succeeds.

406
The thousandth year of Rome.

was,

Rome.

was, that when Marinus had rebelled, he averred in the senate, That the traitor's presumption would be very shortly his ruin; which, when it happened accordingly, Philip appointed him to succeed in the command of the rebellious army. Decius, who was a man of great subtlety, being thus entrusted with so much power, upon arriving at the army found that the soldiers were resolved on investing him with the supreme authority. He therefore seemed to suffer their importunities, as if through constraint; and, in the mean time, sent Philip word, that he had unwillingly assumed the title of emperor, the better to secure it for the rightful possessor; adding, that he only looked for a convenient opportunity of giving up his pretensions and title together. Philip knew mankind too well, to rely upon such professions: he therefore got together what forces he could from the several provinces, and led them forward towards the confines of Italy. However, the army was scarce arrived at Verona, when it revolted in favour of Decius, and setting violently upon Philip, a centinel, with one blow, cut off his head, or rather cleaved it asunder, separating the under jaw from the upper. Such was the deserved death of Philip, in the 45th year of his age, after a reign of about five years; Decius being universally acknowledged as his successor, A. D. 248.

407
Philip
murdered,
and is suc-
ceeded by
Decius.

The activity and wisdom of Decius in some measure stopped the hastening decline of the Roman empire. The senate seemed to think so highly of his merits, that they voted him not inferior to Trajan; and indeed he seemed in every instance to consult their dignity in particular, and the welfare of all inferior ranks of people. He permitted them to choose a censor, as was the custom in the flourishing times of Rome; and Valerian, his general, a man of such strict morals, that his life was said to be a continual censorship, was chosen to that dignity.—But no virtues could now prevent the approaching downfall of the state: the obstinate disputes between the Pagans and the Christians within the empire, and the unceasing irruptions of barbarous nations from without, enfeebled it beyond the power of a remedy. To stop these, a persecution of the Christians, who were now grown the most numerous body of the people, was impolitically, not to say unjustly, begun; in which thousands were put to death, and all the arts of cruelty tried in vain to lessen their growing number. This persecution was succeeded by dreadful devastations from the Goths, particularly in Thrace and Mœsia, where they had been most successful. These irruptions Decius went to oppose in person; and coming to an engagement with them, slew 30,000 of the barbarians in one battle. However, being resolved to pursue his victory, he was, by the treachery of Gallus his own general, led into a defile, where the king of the Goths had secret information to attack him. In this disadvantageous situation, Decius first saw his son killed with an arrow, and soon after his whole army put to the rout. Wherefore, resolving not to survive his loss, he put spurs to his horse, and instantly plunging into a quagmire, was swallowed up, and his body could never be found after. He died in the 50th year of his age, after a short reign of two years and six months; leaving the character of an excellent prince, and one capable of averting the de-

408
Is over-
come, and
killed by
the Goths.

struction of the empire, if human means could have effected it.

Rome.

Gallus, who had thus betrayed the Roman army, had address enough to get himself declared emperor by that part of it which survived the defeat; he was 45 years old when he began to reign, and was descended from an honourable family in Rome. He bought a dishonourable peace from the enemies of the state, agreeing to pay a considerable annual tribute to the Goths, whom it was his duty to repress. Having thus purchased a short remission from war, by the disgrace of his country, he returned to Rome, to give a loose to his pleasures, regardless of the wretched situation of the empire.

409
Succeeded
by Gallus.

Nothing can be more deplorable than the state of the Roman provinces at this time. The Goths and other barbarous nations, not satisfied with their late bribes to continue in peace, broke in upon the eastern parts of Europe. On the other side, the Persians and Scythians committed unheard of ravages in Mesopotamia and Syria. The emperor, regardless of every national calamity, was lost in debauch and sensuality at home; and the Pagans were allowed a power of persecuting the Christians through all parts of the state; these calamities were succeeded by a pestilence, that seemed to have in general spread over every part of the earth, and which continued raging for several years in an unheard of manner; and all these by a civil war, which followed shortly after, between Gallus and his general Æmilianus, who having gained a victory over the Goths, was proclaimed emperor by his conquering army. Gallus hearing this, was soon roused from the intoxications of pleasure, and prepared to oppose his dangerous rival. Both armies met in Mœsia, and a battle ensued, in which Æmilianus was victorious, and Gallus, with his son, were slain. His death was merited, and his vices were such as to deserve the detestation of posterity. He died in the 47th year of his age, after an unhappy reign of two years and four months, in which the empire suffered inexpressible calamities. Æmilianus, after his victory over Gallus, expected to be acknowledged emperor; but he soon found himself miserably disappointed. The senate refused to acknowledge his claims; and an army that was stationed near the Alps chose Valerian, their own commander, to succeed to the throne. In consequence of this, Æmilianus's soldiers began to consider their general as an obstacle to the universal tranquillity, and slew him in order to avoid the mischiefs of a civil war.

Valerian being thus universally acknowledged as emperor, although arrived at the age of 70, set about reforming the state with a spirit that seemed to mark a good mind and unabated vigour. But reformation was then grown almost impracticable. The disputes between the Pagans and Christians divided the empire as before; and a dreadful persecution of the latter ensued. The northern nations over-ran the Roman dominions in a more formidable manner than ever; and the empire began to be usurped by a multitude of petty leaders, each of whom, neglecting the general state, set up for himself. To add to these calamities, the Persians, under their king Sapor, invaded Syria; and coming into Mesopotamia, took the unfortunate Valerian prisoner, and

491
Valerian
taken pri-
soner, and
cruelly in-
sulted by
the Per-
sians.

Rome. sooner, as he was making preparations to oppose them. Nothing can exceed the indignities, as well as the cruelties, which were practised upon this unhappy monarch, thus fallen into the hands of his enemies. Sapor, we are told, always used him as a footstool for mounting his horse; he added the bitterness of ridicule to his insults, and usually observed, That an attitude like that to which Valerian was reduced, was the best statue that could be erected in honour of his victory. This horrid life of insult and sufferance continued for seven years, and was at length terminated by the cruel Persian's commanding his prisoner's eyes to be plucked out, and afterwards causing him to be flayed alive.

492
The empire
invaded on
all sides by
the barba-
rians.

The news of the defeat of the Roman army by the Persians, and the captivity of Valerian, no sooner reached the barbarous nations at war with Rome, than they poured on all sides into the Roman territories in incredible multitudes, threatening the empire, and Rome itself, with utter destruction. The Goths and Scythians ravaged Pontus and Asia, committing every where dreadful devastations; the Alemanni and Franks having over-run Rætia, advanced as far as Ravenna; putting all to fire and sword; the Quadi and Sarmatians seized on great part of Dacia and Pannonia; while other barbarous nations, invading Spain, made themselves masters of Tarraco and other important places in that province. In the mean time Gallienus, the son of Valerian, having promised to revenge his father's captivity, and repress the barbarians, was chosen emperor without any opposition. He was at that time in Gaul; but hastened into Italy, from whence he drove out the barbarians, either by the terror of his approach, or by overcoming them in battle.—In Dacia and Pannonia, also, the barbarians were driven back by Regillianus, who commanded there, and who is said to have gained several victories in one day.

But in the mean time, one Ingenuus, a man of great reputation in war, and universally beloved both by the people and soldiery, caused himself to be proclaimed emperor in Pannonia, where he was generally acknowledged as well as in Mœsia. Gallienus no sooner heard of his revolt, than he marched from the neighbourhood of Ravenna, where he then was, into Illyricum, engaged Ingenuus, and put him to flight. Some authors tell us, that Ingenuus was killed after the battle by his own soldiers; while others affirm, that he put an end to his own life to avoid falling into the hands of Gallienus, who used his victory with a cruelty hardly to be paralleled. The following letter to Verianus Celer, one of his officers, will show the disposition of this emperor: "I shall not be satisfied (says he) with your putting to death only such as have borne arms against me, and might have fallen in the field: you must in every city destroy all the males, old and young; spare none who have wished ill to me; none who have spoken ill of me the son of Valerian, the father and brother of princes. Ingenuus emperor! Tear, kill, cut in pieces without mercy: you understand me; do then as you know I would do, who have written to you with my own hand." In consequence of these cruel orders, a most dreadful havoc was made among that unhappy people; and, in several cities, not one male child was left alive. The troops who had formerly served under Ingenuus, and the inhabitants of Mœsia who had escaped the general

493
Monstrous
cruelty of
the new
emperor
Gallienus.

slaughter, provoked by these cruelties, proclaimed Regillianus emperor. He was a Dacian by birth, descended, as was said, from the celebrated king Decabalus whom Trajan had conquered; and had, by several gallant actions, gained reputation in the Roman armies. After he was proclaimed emperor, he gained great advantages over the Sarmatians; but was soon after murdered by his own soldiers. These revolts were quickly followed by many others. Indeed it is not surprising, at a time when the reins of government were held with so loose an hand, that a crowd of usurpers should start up in every province of the empire. The great number of usurpers who pretended to the empire about this time have been distinguished by the name of the thirty tyrants. However, there were only 19; viz. Cyriades, Macrianus, Balista, Udenatus, and Zenobia in the east: in Gaul, and the western provinces, Posthumus, Lollianus, Victorinus and his mother Victoria, Marius, and Tetricus; in Illyricum, and on the confines of the Danube, Ingenuus, Regillianus, and Aureolus; in Pontus, Saturninus; in Iffuria, Trebellianus; in Thessaly, Piso; in Achaia, Valens; in Egypt, Æmilianus; and in Africa, Celsus. Several of these pretenders to the empire, however, though branded with the opprobrious appellation of tyrants, were eminent examples of virtue, and almost all of them were possessed of a considerable share of vigour and ability. The principal reason assigned for their revolt was, the infamous character of Gallienus, whom neither officers nor soldiers could bear to serve. Many of them, however, were forced by the soldiers to assume the imperial dignity much against their will. "You have lost," said Saturninus to his soldiers when they invested him with the purple, "a very useful commander, and have made a very wretched emperor." The apprehensions of Saturninus were justified by the event. Of the 19 usurpers already mentioned, not one died a natural death; and in Italy and Rome Gallienus alone continued to be acknowledged emperor. That prince indeed honoured Odenatus prince of Palmyra with the title of *Augustus*, who continued to possess an independent sovereignty in the east all his lifetime, and on his death transmitted it to his wife Zenobia. See PALMYRA.

Rome.

494
The thirty
tyrants.

The consequences of these numerous usurpations were the most fatal that can be conceived. The elections of these precarious emperors, their life and death, were equally destructive to their subjects and adherents. The price of their elevation was instantly paid to the troops by an immense donative drawn from the exhausted people. However virtuous their character, and however pure their intentions might be, they found themselves reduced to the necessity of supporting their usurpation by frequent acts of rapine and cruelty. When they fell, they involved armies and provinces in their fall, as appears from the letter of Gallienus already quoted. Whilst the forces of the state were dispersed in private quarrels, the defenceless provinces lay exposed to every invader. The bravest usurpers were compelled, by the perplexity of their situation, to conclude dishonourable treaties with the barbarians, and even to submit to shameful tributes, and introduce such numbers of barbarians into the Roman service as seemed sufficient at once to overthrow the empire.

495
Fatal conse-
quences of
these usur-
pations.

Rome.
496
Gallienus
murdered,
and is suc-
ceeded by
Claudius,

But when the empire seemed thus ready to sink at once, it suddenly revived on the death of Gallienus, who was murdered by Martian, one of his own generals, while he besieged Aureolus, one of the tyrants, in Milan. His death gave general satisfaction to all, except his soldiers, who hoped to reap the reward of their treachery by the plunder of Milan. But being frustrated in these expectations, and in some measure kept within bounds by the largesses of Martian, Flavius Claudius was nominated to succeed, and joyfully accepted by all orders of the state, and his title confirmed by the senate and the people.

We are not sufficiently assured of this emperor's lineage and country. Some affirm that he was born in Dalmatia, and descended from an ancient family there; others assert that he was a Trojan; and others, that he was son to the emperor Gordian. But, whatever might have been his descent, his merits were by no means doubtful. He was a man of great valour and conduct, having performed the most eminent services against the Goths, who had long continued to make irruptions into the empire. He was now about 55 years old, equally remarkable for the strength of his body and the vigour of his mind; he was chaste and temperate, a rewarder of the good, and a severe punisher of such as transgressed the laws. Thus endowed, therefore, he in some measure put a stop to the precipitate decline of the empire, and once more seemed to restore the glory of Rome.

497
Who de-
feats the
Goths, and
retrieves the
affairs of
the empire,

His first success, upon being made emperor, was against Aureolus, whom he defeated near Milan. His next expedition was to oppose the Goths, against whom he led a very numerous army. These barbarians had made their principal and most successful irruptions into Thrace and Macedonia, swarmed over all Greece, and had pillaged the famous city of Athens, which had long been the school of all the polite arts to the Romans. The Goths, however, had no veneration for those embellishments that tend to soften and humanize the mind, but destroyed all monuments of taste and learning with the most savage alacrity. It was upon one of these occasions, that, having heaped together a large pile of books in order to burn them, one of the commanders dissuaded them from the design, alleging, that the time which the Grecians should waste on books would only render them more unqualified for war. But the empire seemed to tremble, not only on that side, but almost on every quarter. At the same time, above 300,000 of these barbarians (the Heruli, the Trutangi, the Virturgi, and many nameless and uncivilized nations) came down the river Danube, with 2000 ships, fraught with men and ammunition, spreading terror and devastation on every side.

In this state of universal dismay, Claudius alone seemed to continue unshaken. He marched his disproportioned army against the savage invaders; and though but ill prepared for such an engagement, as the forces of the empire were then employed in different parts of the world, he came off victorious, and made an incredible slaughter of the enemy. The whole of their great army was either cut to pieces or taken prisoners: houses were filled with their arms; and scarce a province of the empire, that was not furnished with slaves from those that survived the defeat. These successes were followed by many others in different parts of the empire; so that

the Goths, for a considerable time after, made but a feeble opposition. He some time after marched against the revolted Germans, and overthrew them with considerable slaughter. His last expedition was to oppose Tetricus and Zenobia, his two puissant rivals in the empire. But on his march, as he approached near Sirmium, in Pannonia, he was seized with a pestilential fever, of which he died in a few days, to the great regret of his subjects, and the irreparable loss of the Roman empire. His reign, which was not quite two years continuance, was active and successful; and such is the character given of him by historians, that he is said to have united in himself the moderation of Augustus, the valour of Trajan, and the piety of Antoninus.

Immediately after the death of Claudius, the army made unanimous choice of Aurelian, who was at that time master of the horse, and esteemed the most valiant commander of his time. However, his promotion was not without opposition on the part of the senate, as Quintillus, the brother of the deceased emperor, put in his claim, and was for a while acknowledged at Rome. But his authority was of very short duration; for finding himself abandoned by those who at first instigated him to declare for the throne, he chose to prevent the severity of his rival by a voluntary death, and causing his veins to be opened, expired, after having reigned but 17 days.

Aurelian being thus universally acknowledged by all the states of the empire, assumed the command, with a greater show of power than his predecessors had enjoyed for some time before. This active monarch was born of mean and obscure parentage in Dacia, and was about 55 years old at the time of his coming to the throne. He had spent the early part of his life in the army, and had risen through all the gradations of military duty. He was of unshaken courage and amazing strength; he in one engagement killed 40 of the enemy with his own hand, and above 900 at several different times. In short, his valour and expedition were such, that he was compared to Julius Cæsar; and, in fact, only wanted mildness and clemency to be every way his equal.

The whole of this monarch's reign was spent in repressing the irruptions of the northern nations, in humbling every other pretender to the empire, and punishing the monstrous irregularities of his own subjects. He defeated the Marcomanni, that had invaded Italy, in three several engagements, and at length totally destroyed their army. He was not less successful against Zenobia, the queen of the East, a woman of the most heroic qualifications, who had long disclaimed the Roman power, and established an empire of her own, as is related under the article PALMYRA.

Aurelian having thus brought back peace to the empire, endeavoured, by the rigours of justice, to bring back virtue also. He was very strict in punishing the crimes of the soldiery: in his orders to his lieutenants, he insisted that the peasants should not be plundered upon any pretences; that not even a grape, a grain of salt, or a drop of oil, should be exacted unjustly. He caused a soldier, who had committed adultery with his hostess, to have his feet tied to the tops of two trees, forcibly bent at top to meet each other; which being let loose, and suddenly recoiling, tore the criminal

499
His great
success
against the
barbarians.

^{Rome.} criminal in two. This was a severity that might take the name of cruelty; but the vices of the age, in some measure, required it. In these punishments inflicted on the guilty, the Christians, who had all along been growing more numerous, were sharers. Against these he drew up several letters and edicts, which showed that he intended a very severe persecution; but if we may believe the credulous historians of the times, he was diverted just as he was going to sign them by a thunderbolt, which fell so near his person, that all the people judged him to be destroyed.

But, however Heaven might have interposed on this occasion, it is certain that his severities at last were the cause of his destruction. Menesthus, his principal secretary, having been threatened by him for some fault which he had committed, began to consider how he might prevent the meditated blow. For this purpose, he forged a roll of the names of several persons, whom he pretended the emperor had marked out for death, adding his own to strengthen him in the confidence of the party. The scroll thus contrived was shown with an air of the utmost secrecy to some of the persons concerned; and they, to procure their safety, immediately agreed with him to destroy the emperor. This resolution was soon put in execution; for, as the emperor passed with a small guard from Uraclea, in Thrace, towards Byzantium, the conspirators set upon him at once, and slew him with very small resistance. He was slain in the 60th, or, as some say, in the 63d year of his age, after a very active reign of almost five years.

The number of pretenders to the throne, which had formerly infested the empire, were, by the last monarch's activity, so entirely removed, that there now seemed to be none that would venture to declare himself a candidate. The army referred the choice to the senate; and, on the other side, the senate declined it; so that a space of near eight months elapsed in these negotiations. At length, however, the senate made choice of Tacitus, a man of great merit, and noway ambitious of the honours that were offered him. Upon being solicited to accept the empire, he at first refused, and retired to his country-house in Campania, to avoid their importunities; but being at length prevailed upon, he accepted the reins of government, being at that time 75 years old.

One of the first acts of his government was the punishment of those who had conspired against the late emperor. Menesthus was impaled alive, his body being thrown to be devoured by wild beasts; his estate also was confiscated to the exchequer; and his ready money, which was very considerable, applied towards paying the army. During this short reign, the senate seemed to have a large share of authority, and the historians of the times are liberal of their praises to such emperors as were thus willing to divide their power.— Upon endeavouring to obtain the consulship for his brother Probus, he was refused it by the senate; at which he seemed no way moved, but calmly remarked that the senate best knew whom to choose. This moderation prevailed in all the rest of his conduct: he was extremely temperate; his table was plain, and furnished with nothing expensive; he even prohibited his empress from wearing jewels, and forbade the use of gold and embroidery. He was fond of learning, and the memory of such men as had deserved well of their

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country. He particularly esteemed the works of his namesake Tacitus the historian; commanding that they should be placed in every public library throughout the empire, and that many copies of them should be transcribed at the public charge. A reign begun with such moderation and justice, only wanted continuance to have made the empire happy; but after enjoying the empire about six months, he died of a fever in his march to oppose the Persians and Scythians, who had invaded the eastern parts of the empire.

Upon the death of Tacitus the army seemed divided in the choice of an emperor; one part of it chose Florianus, brother to the deceased; but the majority were for some time undetermined. They alleged amongst each other the necessity of choosing one eminent for valour, honour, piety, clemency, and probity; but the last virtue being that chiefly insisted upon, the whole army, as if by common consent, cried out that Probus should be emperor. He was accordingly confirmed in this dignity with the usual solemnities: and Florianus finding himself deserted, even by those legions who had promised to stand up in his support, opened his arteries and bled himself to death.

Probus was 44 years old when he ascended the throne, being born of noble parentage at Sirmium in Pannonia, and bred up a soldier from his youth. He began early to distinguish himself for his discipline and valour; being frequently the first man who in besieging towns scaled the walls, or that burst into the enemy's camp. He was no less remarkable for single combats, and saving the lives of many eminent citizens. Nor was his activity and courage, when elected to the empire, less apparent, than in his private station. He first repressed the Germans in Gaul, of whom he slew 400,000. He then marched into Dalmatia, to oppose and subdue the Sarmatians. From thence he led his forces into Thrace, and forced the Goths to sue for peace. He after that turned his arms towards Asia; subdued the province of Isauria; and marching onward, conquered a people called the *Blemyes*; who, leaving their native forests of Ethiopia, had possessed themselves of Arabia and Judea, and had continued in a state of rebellion since the reign of Gallienus. Narsis also, the king of Persia, submitted at his approach; and upon his return into Europe, he divided the depopulated parts of Thrace among its barbarous invaders: a circumstance that afterwards produced great calamities to the empire.

His diligence was not less conspicuous in suppressing intestine commotions. Saturninus, being compelled by the Egyptians to declare himself emperor, was defeated and slain. Proculus also (a person remarkable only for his great attachment to women, and who boasted in a letter, that, having taken 100 Sarmatian virgins prisoners, he deprived ten of that name in one night, and all the rest within a fortnight) set up against the emperor; but was compelled to fly, and at length delivered up by the Germans. At the same time Conosus (who was a remarkable votary to Bacchus, being able to drink as much wine as ten could do, without being disordered) rebelled, and being overcome hanged himself in despair. Probus, when he saw him immediately after his death, could not avoid pointing to him, and saying, "There hangs not a man but a cask." Still, however, notwithstanding every effort to give quiet to the empire,

3 L

the

Rome.

502

His death.

503

Probus raised to the empire.

504

His conquests.

500
He is murdered.

501
Tacitus chosen emperor.

Rome.

the barbarians who surrounded it kept it in continual alarms. They were frequently repulsed into their native wilds, but they as certainly returned with fresh rage and increased ferocity. The Goths and Vandals, finding the emperor engaged in quelling domestic disputes, renewed their accustomed inroads, and once more felt the punishment of their presumptions. They were conquered in several engagements; and Probus returned in triumph to Rome. His active temper, however, would not suffer him to continue at rest whilst a single enemy was left to conquer. In his last expedition he led his soldiers against the Persians; and going through Sirmium, the place of his nativity, he there employed several thousands of his soldiers in draining a fen that was incommensurable to the inhabitants. The fatigues of this undertaking, and the great restraint that was laid upon the soldiers licentious manners, produced a conspiracy, which ended in his ruin: for taking the opportunity as he was marching into Greece, they set upon and slew him after he had reigned six years and four months with general approbation.

505
Is murdered.

507
Reigns of
Carus, Carinus, and Numerianus.

Carus, who was prætorian prefect to the deceased emperor, was chosen by the army to succeed him; and he, to strengthen his authority, named his two sons Carinus and Numerianus with him in command; the former of whom was as much sullied by his vices, as the youngest was virtuous, modest, and courageous. The new emperor had scarce time to punish the murderers of the late monarch, when he was alarmed by a fresh irruption of the Sarmatians; over whom he gained a signal victory. The Persian monarch also made some attempts upon the empire; but Carus assured his ambassadors, that if their master persisted in his obstinacy, all his fields should shortly be as bare as his own bald head, which he showed them. In consequence of this threat, he marched to the very walls of Ctesiphon, and a dreadful battle ensuing, he once more gained a complete victory. What the result of this success might have been, is not known; for he was shortly after struck dead by lightning in his tent, with many others that were round him. Numerianus, the youngest son, who accompanied his father in this expedition, was inconsolable for his death; and brought such a disorder upon his eyes with weeping, that he was obliged to be carried along with the army, shut up in a close litter. The peculiarity of his situation, after some time, excited the ambition of Aper, his father-in-law, who supposed that he could now, without any great danger, aim at the empire himself. He therefore hired a mercenary villain to murder the emperor in his litter; and the better to conceal the fact, gave out that he was still alive, but unable to endure the light. In this manner was the dead body carried about for some days, Aper continuing to attend it with the utmost appearance of respect, and to take orders as usual. The offensiveness, however, of its smell at length discovered the treachery, and excited an universal uproar throughout the army. In the midst of this tumult, Dioclesian, one of the most noted commanders of his time, was chosen emperor, and with his own hand slew Aper; having thus, as it is said, fulfilled a prophecy, which had said, that Dioclesian should be emperor after he had slain a boar; alluding to the name of his rival, which signifies a boar. Carinus, the remaining son, did not long survive his father and brother; for giving himself up to his vices,

and yet at the same time opposing the new-made emperor, the competitors led their forces into Mœsia; where Dioclesian being victorious, Carinus was slain by a tribune of his own army, whose wife he had formerly abused.

Rome.

Dioclesian was a person of mean birth; being accounted, according to some, the son of a scrivener; and of a slave, according to others. He received his name from Dioclea, the town in which he was born; and was about 40 years old when he was elected to the empire. He pardoned all who had joined Carinus, without injuring either their fortunes or honours. Conscious also that the weight of empire was too heavy for one alone to sustain, he took in Maximian, his general, as a partner in the fatigues of duty, making him his equal and companion on the throne. Thus mutually assisting each other, these two continued to live in strict friendship; and though somewhat differing in temper (as Maximian was rather a man of vicious inclinations), yet they concurred in promoting the general good, and humbling their enemies. And it must be observed, that there never was a period in which there were more numerous or formidable enemies to oppose.

508
Dioclesian
raised to
the em-
pire.

509
Take Ma-
ximian for
his partner.

The peasants and labourers in Gaul made a dangerous insurrection, under the conduct of Amandus and Helianus, but were subdued by Maximian. Achilles, who commanded in Egypt, proclaimed himself emperor; and it was not without many bloody engagements that he was overcome, and condemned by Dioclesian to be devoured by lions. In Africa, the Roman legions, in like manner, joined with many of the natives, seized upon the public revenues, and plundered those who continued in their duty. These were also subdued by Maximian; and, after a long dubious war, constrained to sue for peace. About the same time, a principal commander in Britain, named *Carausius*, proclaimed himself emperor, and possessed himself of the island. To oppose this general's claims, Maximian made choice of Constantius Chlorus, whom he created Cæsar, and married to Theodora his daughter-in-law. He, upon his arrival in Britain, finding Carausius very strong, and continually reinforced from Germany, thought proper to come to an accommodation; so that this usurper continued for seven years in quiet possession of the whole island, till he was slain by Aleetus, his friend and intimate. About this time also, Narses, king of Persia, began a dangerous war upon the empire, and invaded Mesopotamia. To stop the progress of the enemy upon this quarter, Dioclesian made choice of Galerius (surnamed *Armentarius*, from the report of his being born of a cow-herd in Dacia); and he likewise was created Cæsar. His success also, though very doubtful in the beginning, was in the end terminated according to his wishes. The Persians were overcome in a decisive engagement, their camp plundered and taken, and their king's wives and children made prisoners of war. There only remained, of all the enemies of the Roman empire, those who lay to the northward subdued. These were utterly unconquerable, as well upon account of their savage fierceness, as the inhospitable severity of the climate and soil from whence they issued. Ever at war with the Romans, they issued forth, when the armies that were to repress their invasions were called away; and upon their return, they as suddenly withdrew into cold, barren, and inaccessible places.

510
Insurrec-
tions, and
other cala-
mities.

Rome. places, which only themselves could endure. In this manner the Goths, Sarmatians, Alani, Quadi, &c. poured down in incredible numbers; while every defeat seemed but to increase their strength and perseverance. Of these, multitudes were taken prisoners, and sent to people the more southern parts of the empire; still greater numbers were destroyed; and though the rest were driven back to their native forests, yet they continued ever mindful of their inveterate enmity, and, like a savage beast, only continued inactive, till they had licked their wounds for a new encounter.

511 The Christians cruelly persecuted. During this interval, as if the external miseries of the empire were not sufficient, the tenth and last great persecution was renewed against the Christians. This is said to have exceeded all the former in severity: and such was the zeal with which it was pursued, that, in an ancient inscription, we are informed that they had effaced the name and superstition of the Christians, and had restored and propagated the worship of the gods. Their attempts, however, were but the malicious efforts of an expiring party; for Christianity shortly after was established by law, and triumphed over the malice of all its enemies. In the midst of the troubles raised by this persecution, and of the contests that struck at the internal parts of the state, Dioclesian and Maximian surprised the world by resigning their dignities on the same day, and both retiring into private stations. Historians are much divided concerning the motives that thus induced them to give up those honours which they had purchased with so much danger. Some ascribe it to the philosophical turn of Dioclesian; and others, to his being disgusted with the obstinacy of his Christian subjects: but Lactantius asserts, that he was compelled to it, together with his partner, by Galerius, who coming to Nicomedia, upon the emperor's recovery from a great sickness, threatened him with a civil war in case he refused to resign. However, of this we are well assured, that he still preserved a dignity of sentiment in his retirement, that might induce us to believe he had no other motive for resignation than the love of quiet, and the consciousness of his inability to discharge on a sick-bed the duties of a sovereign. Having retired to his birth-place, he spent his time in cultivating his garden, assuring his visitors that then only he began to enjoy the world, when he was thought by the rest of mankind to forsake it. When also some attempted to persuade him to resume the empire, he replied, That if they knew his present happiness, they would rather endeavour to imitate than disturb it. In this contented manner he lived some time, and at last died either by poison or madness, it is uncertain which. His reign, which continued 20 years, was active and useful; and his authority, tinged with severity, was well adapted to the depraved state of morals at that time.

Maximian, his partner in the empire and in resignation, was by no means so contented with his situation. He longed once more for power, and disturbed the two succeeding reigns with various efforts to resume it; attempting to engage Dioclesian in the same design. Being obliged to leave Rome, where he had bred great confusion, he went over into Gaul, where he was kindly received by Constantine, the then acknowledged emperor of the west. But here also continuing his intrigues, and endeavouring to force his own daughter and destroy her husband, he was detected, and condemna-

ed to die by whatever death he should think proper; and Lactantius tells us that he chose hanging.

Upon the resignation of the two emperors, the two Cæsars whom they had formerly chosen were universally acknowledged as their successors. Constantius, Chlorus, who was so called from the plainness of his complexion, was virtuous, valiant, and merciful. Galerius, on the other hand, was brave, but brutal, incontinent, and cruel. As there was such a disparity in their tempers, they readily agreed, upon coming into full power, to divide the empire; Constantius being appointed to govern the western parts; namely, Italy, Sicily, the greatest part of Africa, together with Spain, Gaul, Britain, and Germany: Galerius had the eastern parts allotted to his share; to wit, Illyricum, Pannonia, Thrace, Macedonia, all the provinces of Greece, and the Lesser Asia, together with Egypt, Syria, Judea, and all the countries eastward. The greatness of the division, however, soon induced the emperors to take in two partners more, Severus and Maximin, who were made Cæsars, and assisted in the conducting of affairs; so that the empire now was under the guidance of four persons, all invested with supreme authority.

We are informed but of few particulars of the reign of Constantius, except a detail of his character, which appears in every light most amiable. He was frugal, chaste, and temperate. His mercy and justice were equally conspicuous in his treatment of the Christians, whom he would not suffer to be injured; and when at length persuaded to displace all the Christian officers of his household that would not change their religion, when some of them complied he sent them away in disgrace; alleging, that those who were not true to their God, would never be faithful to their prince.

In the second year of his reign he went over into Britain; and leaving his son Constantine as a kind of hostage in the court of his partner in the empire, took up his residence at York. He there continued in the practice of his usual virtues; till falling sick, he began to think of appointing his son for his successor. He accordingly sent for him with all speed; but he was past recovery before his arrival: notwithstanding, he received him with marks of the utmost affection, and raising himself in his bed, gave him several useful instructions, particularly recommending the Christians to his protection. He then bequeathed the empire to his care; and crying out, that none but the pious Constantine should succeed him, he expired in his arms.

In the mean time, Galerius, his partner in the empire, being informed of Constantine's advancement, testified the most ungovernable rage, and was even going to condemn the messenger who brought him the account: but being dissuaded, he seemed to acquiesce in what he could not prevent, and sent him the marks of royalty; but at the same time declared Severus emperor, in opposition to his interests. Just about this time also, another pretender to the empire started up. This was Maxentius, a person of mean extraction; but very much favoured by the soldiers, whom he permitted to pillage at discretion. In order to oppose Maxentius, Severus led a numerous army towards the gates of Rome; but his soldiers considering against whom they were to fight, immediately abandoned him; and shortly after he put an end to his own life, by opening his veins. To revenge his death, Galerius marched into Italy, re-

Rome.
513
Constantius, Chlorus, and Galerius, emperors.

514
Maxentius usurps the throne.

Rome. solving to ruin the inhabitants, and to destroy the whole senate. His soldiers, however, upon approaching the capital began to waver in their resolutions: wherefore he was obliged to have recourse to intreaties, imploring them not to abandon him; and, retiring by the same route by which he had advanced, made Licinius, who was originally the son of a poor labourer in Dacia, Cæsar, in the room of Severus who was slain. This seemed to be the last act of his power; for shortly after he was seized with a very extraordinary disorder in his privities, which baffled all the skill of his physicians, and carried him off, after he had languished in torments for near the space of a year. His cruelty to the Christians was one of the many crimes alleged against him; and their historians have not failed to aggravate the circumstances of his death as a judgment from Heaven for his former impiety. However this be, he abated much of his severities against them on his deathbed; and revoked those edicts which he had formerly published, tending to their persecution, a little before his death.

315
Dreadful
death of
Galerius.

Constantine being thus delivered from his greatest opponent, might now be considered as possessing more power than any of his rivals who were yet remaining. The empire was at that time divided between him and three others: Maxentius, who governed in Rome, a person of a cruel disposition, and a steadfast supporter of paganism; Licinius, who was adopted by Galerius, and commanded in the east; and likewise Maximin, who had formerly been declared Cæsar with Severus, and who also governed some of the eastern provinces.

316
Constantine's vision and conversion to Christianity.

For some time all things seemed to wear a peaceful appearance; till at length, either ambition, or the tyrannical conduct of Maxentius, induced Constantine to engage in an expedition to expel that commander from Rome, and to make the proper preparations for marching into Italy. It was upon this occasion that he formed a resolution which produced a mighty change in the politics as well as the morals of mankind, and gave a new turn to the councils of the wise, and the pursuits of ambition. One evening, as we are told by Eusebius, the army being upon its march toward Rome, Constantine was taken up with various considerations upon the fate of sublunary things, and the dangers of his approaching expedition: sensible of his own incapacity to succeed without divine assistance, he employed his meditations upon the opinions that then were chiefly agitated among mankind, and sent up his ejaculations to Heaven to inspire him with wisdom to choose the path he ought to pursue. It was then, as the sun was declining, that there suddenly appeared a pillar of light in the heavens, in the fashion of a cross, with this inscription, ΤΟΤΩ ΝΙΚΗ "In this overcome." So extraordinary an appearance did not fail to create astonishment both in the emperor and his whole army, who considered it as their dispositions led them to believe. Those who were attached to paganism, prompted by their auspices, pronounced it a most inauspicious omen, portending the most unfortunate events. But it made a different impression on the emperor's mind; who, as the account goes, was farther encouraged by visions the same night. He therefore, the day following, caused a royal standard to be made, like that which he had seen in the heavens; and commanded it to be carried before him in his wars, as an ensign of victory and celestial

protection. After this, he consulted with several of the principal teachers of Christianity, and made a public avowal of that sacred persuasion. **Rome.**

Constantine having thus attached his soldiers to his interest, who were mostly of the Christian persuasion, lost no time in entering Italy with 90,000 foot and 8000 horse; and soon advanced to the very gates of Rome. The unfortunate Maxentius, who had long given himself up to ease and debauchery, now began to make preparations when it was too late. He first put in practice all the superstitious rites which paganism taught to be necessary; and then consulted the Sibylline books; from whence he was informed, that on that great day the enemy of Rome should perish. This prediction, which was equivocal, he applied to Constantine; wherefore, leaving all things in the best posture, he advanced from the city with an army of 100,000 foot and 18,000 horse. The engagement was for some time fierce and bloody, till his cavalry being routed, victory declared upon the side of his opponent, and he himself was drowned in his flight by the breaking down of a bridge as he attempted to cross the river Tiber. **516**
Maxentius defeated and killed.

Constantine, in consequence of this victory, entering the city, disclaimed all praises which the senate and people were ready to offer; ascribing his success to a superior power. He even caused the cross, which he was said to have seen in the heavens, to be placed at the right of all his statues, with this inscription: "That under the influence of that victorious cross, Constantine had delivered the city from the yoke of tyrannical power, and had restored the senate and people of Rome to their ancient authority." He afterwards ordained, that no criminal should for the future suffer death by the cross; which had formerly been the most usual way of punishing slaves convicted of capital offences. Edicts were soon after issued, declaring that the Christians should be eased from all their grievances, and received into places of trust and authority. Thus the new religion was seen at once to prevail over the whole Roman empire; and as that enormous fabric had been built and guided upon pagan principles, it lost a great deal of its strength and coherence when those principles were thus at once subverted.

Things continued in this state for some time, Constantine all the while contributing what was in his power to the interest of religion, and the revival of learning, which had long been upon the decline, and was almost wholly extinct in the empire. But in the midst of these assiduities, the peace of the empire was again disturbed by the preparations of Maximin, who governed in the east, and who, desirous of a full participation of power, marched against Licinius with a very numerous army. In consequence of this step, after many conflicts, a general engagement ensued, in which Maximin suffered a total defeat; many of his troops were cut to pieces, and those that survived submitted to the conqueror. Maximin, however, having escaped the general carnage, once more put himself at the head of another army, resolving to try the fortune of the field; but death prevented his design. As he died by a very extraordinary kind of madness, the Christians, of whom he was the declared enemy, did not fail to ascribe his end to a judgment from heaven; but this was the age in which false judgments and false miracles made up the bulk of their uninformative history. **517**
Maximin's defeat and death.

Con-

Rome.
518
War be-
tween Con-
stantine and
Licinius.

Constantine and Licinius thus remaining undisputed possessors and partners in the empire, all things promised a peaceable continuance of friendship and power. However, it was soon found, that the same ambition that aimed after a part, would be content with nothing less than the whole. Pagan writers ascribe the rupture between these two potentates to Constantine; while the Christians, on the other hand, impute it wholly to Licinius. Both, perhaps, might have concurred: for Licinius is convicted of having persecuted Christianity, which was so highly favoured by his rival; and Constantine is known to have been the first to begin the preparations for an open rupture. Both sides exerted all their power to make opposition; and at the head of very formidable armies, came to an engagement near Cybalis, in Pannonia. Constantine, previous to the battle, in the midst of his Christian bishops, begged the assistance of Heaven; while Licinius, with equal zeal, called upon the pagan priests to intercede with the gods in his favour. Constantine, after an obstinate resistance from the enemy, became victorious; took their camp; and, after some time, compelled Licinius to sue for a truce; which was agreed upon. But this was of no long continuance; for soon after, the war breaking out afresh, and the rivals coming once more to a general engagement, it proved decisive. Licinius was entirely defeated, and pursued by Constantine into Nicomedia, where he surrendered himself up to the victor; having first obtained an oath that his life should be spared, and that he should be permitted to pass the remainder of his days in retirement. This, however, Constantine shortly after broke; for either fearing his designs, or finding him actually engaged in fresh conspiracies, he commanded him to be put to death, together with Martian his general, who some time before had been created Cæsar.

519
Licinius
overcome
and put to
death.

Constantine being now sole monarch of the empire, without a rival to divide his power, or any person from whose claims he could have the least apprehensions, resolved to establish Christianity on so sure a basis, that no new regulations should shake it. He commanded that in all the provinces of the empire the orders of the bishops should be exactly obeyed; a privilege of which, in succeeding times, these fathers made but a very indifferent use. He called also a general council of these, to meet at Nicea, in order to repress the heresies that had already crept into the church, particularly that of Arius. To this place repaired about 318 bishops, besides a multitude of presbyters and deacons, together with the emperor himself; who all, to about 17, concurred in condemning the tenets of Arius; who, with his associates, was banished into a remote part of the empire.

520
Constantine puts
his wife
and son to
death.

Having thus restored universal tranquillity to the empire, he was not able to ward off the calamities of a more domestic nature. As the histories of that period are entirely at variance with each other, it is not easy to tell the motives which induced him to put his wife Fausta and his son Crispus to death. The most plausible account is this: Fausta the empress, who was a woman of great beauty, but of extravagant desires, had long, though secretly, loved Crispus, Constantine's son by a former wife. She had tried every art to inspire this youth with a mutual passion; but, finding her more distant efforts ineffectual, had even the confidence to make him an open confession of her desires. This pro-

duced an explanation, which was fatal to both. Crispus received her addresses with detestation; and she, to be revenged, accused him to the emperor. Constantine, fired at once with jealousy and rage, ordered him to die without a hearing; nor did his innocence appear till it was too late for redress. The only reparation therefore that remained, was the putting Fausta, the wicked instrument of his former cruelty, to death; which was accordingly executed upon her, together with some others who had been accomplices in her falsehood and treachery.

But the private misfortunes of a few were not to be weighed against evils of a more general nature, which the Roman empire shortly after experienced. These arose from a measure which this emperor conceived and executed, of transferring the seat of the empire from Rome to Byzantium, or *Constantinople*, as it was afterwards called. Whatever might have been the reasons which induced him to this undertaking; whether it was because he was offended at some affronts he received at Rome, or that he supposed Constantinople more in the centre of the empire, or that he thought the eastern parts more required his presence, experience has shown that they were weak and groundless. The empire had long before been in the most declining state; but this in a great measure gave precipitation to its downfall. After this it never resumed its former splendor, but languished.

521
Transfers
the seat of
the empire to
Constanti-
nople.

His first design was to build a city which he might make the capital of the world; and for this purpose, he made choice of a situation at Chalcedon in Asia Minor; but we are told, that in laying out the ground-plan, an eagle caught up the line and flew with it over to Byzantium, a city which lay upon the opposite side of the Bosphorus. Here, therefore, it was thought expedient to fix the seat of the empire; and indeed nature seems to have formed it with all the conveniences and all the beauties which might induce power to make it the seat of residence. It was situated on a plain that rose gently from the water; it commanded that strait which unites the Mediterranean with the Euxine sea, and was furnished with all the advantages which the most indulgent climate could bestow. This city, therefore, he beautified with the most magnificent edifices; he divided it into 14 regions; built a capitol, an amphitheatre, many churches, and other public works; and having thus rendered it equal to the magnificence of his idea, he dedicated it in a very solemn manner to the God of martyrs; in about two years after, repairing thither with his whole court.

This removal produced no immediate alteration in the government of the empire; the inhabitants of Rome, tho' with reluctance, submitted to the change; nor was there for two or three years any disturbance in the state, until at length the Goths, finding that the Romans had withdrawn all their garrisons along the Danube, renewed their inroads, and ravaged the country with unheard-of cruelty. Constantine, however, soon repressed their incursions, and so straitened them, that near 100,000 of their number perished by cold and hunger. These and some other insurrections being happily suppressed, the government of the empire was divided as follows. Constantine, the emperor's eldest son, commanded in Gaul and the western provinces; Constantius governed Africa and Illyricum; and

Constantine.

Rome. Constans ruled in Italy. Dalmatius, the emperor's brother, was sent to defend those parts that bordered upon the Goths; and Annibalianus, his nephew, had the charge of Cappadocia and Armenia Minor. This division of the empire still farther contributed to its downfall: for the united strength of the state being no longer brought to repress invasions, the barbarians fought with superior numbers; and conquered at last, though often defeated. Constantine, however, did not live to feel these calamities. The latter part of his reign was peaceful and splendid; ambassadors from the remotest Indies came to acknowledge his authority; the Persians, who were ready for fresh inroads, upon finding him prepared to oppose, sent humbly to desire his friendship and forgiveness. He was above 60 years old, and had reigned above 30 years, when he found his health began to decline. To obviate the effects of his disorder, which was an intermitting fever, he made use of the warm baths of the city; but receiving no benefit from thence, he removed for change of air to Helenopolis, a city which he had built to the memory of his mother. His disorder increasing, he changed again to Nicomedia; where finding himself without hopes of recovery, he caused himself to be baptized; and having soon after received the sacrament, he expired, after a memorable and active reign of 32 years. This monarch's character is represented to us in very different lights: the Christian writers of that time adorning it with every strain of panegyric; the heathens, on the contrary, loading it with all the virulence of invective. He established a religion that continues the blessing of mankind; but pursued a scheme of politics that destroyed the empire.

522
Death of
Constantine.

523
Reign of
Valentinian.

From the time of Constantine to the division of the empire between Valentinian and his brother Valens, the history of Rome is related under the article *CONSTANTINOPLE*, where also that of the eastern part is carried down to the final destruction of that city by the Turks. In the beginning of the reign of Valentinian, the province of Libya Tripolitana was grievously oppressed by the barbarians of the desert, and almost equally so by Romanus its own governor. His conduct was so exceedingly oppressive, that the inhabitants sent a deputation to Valentinian, complaining of their unhappy situation, and desiring redress. Palladius was accordingly sent to inquire into the state of the province; but being gained over by Romanus, he made a false report to the emperor; and thus the unhappy province was left a prey to the merciless invaders and rapacious governor. During the rest of this reign the barbarians continued their inroads into the empire; and among others, we find the Saxons now putting in for a share of the spoils of the ruined empire: however, their army was at this time entirely cut off. At last Valentinian himself took the field against these northern barbarians; and entering the country of the Quadi, destroyed all with fire and sword. The barbarians on this were fain to sue for peace in a very humble manner; but Valentinian, falling into a great passion while speaking to them, threatened to extirpate the whole nation at once. His fury on this occasion produced an apoplexy, or some other mortal disorder; for he suddenly fell down, and being conveyed by his attendants into his chamber, he was seized with violent convulsive fits and contortions of all his limbs, in the agonies of which he expired,

Rome. in the year 375, the 55th of his age, and 12th of his reign.

After the death of Valentinian, his son Gratian took upon him the imperial dignity; soon after becoming master of the whole empire by the death of Valens. The transactions of his reign, and those of his partner Theodosius, are related under the article *CONSTANTINOPLE*, n° 77—89. The death of Theodosius gave the finishing stroke to the Roman affairs; his son Honorius, to whom he left the western empire, being possessed of no abilities whatever, and indeed seeming to have been but very little removed from an idiot. The barbarians appear to have been abundantly sensible of the advantages offered them by the death of Theodosius. He expired in the month of January; and before the accession of spring, the Goths were in arms. The barbarian auxiliaries also now declared their independency; and along with their countrymen, furiously assailed the declining empire. The Goths were now headed by an experienced commander, their celebrated king Alaric; who would have proved formidable even in better times of the empire. He first over-ran Greece, which he accomplished without opposition, through the treachery of the governor, who commanded the troops that defended the pass at Thermopylae to retire at the approach of the enemy. Athens, Corinth, Argos, Sparta, yielded without resistance; and the whole country was ravaged and destroyed by the blood-thirsty barbarians. At last, in the year 397, he was opposed by Stilicho, the general of Honorius, a man of great valour and experience in war. The Goths were defeated with great loss, and afterwards besieged in their camp; but through mistake or negligence in the Roman commander, they were suffered to escape, and make themselves masters of the province of Epirus. Alaric then, having found means to conclude a treaty with the ministers of Constantinople, Stilicho was obliged to retire.

524
Invasion
of the
Goths under
Alaric.

Not long after this, Alaric invaded Italy itself. The emperor, struck with terror, would have abandoned the country and fled into Gaul: but this disgraceful and pernicious measure was opposed by Stilicho; who proposed to the court of Honorius, at that time at Milan, that if they would maintain their ground during his absence, he would soon return with an army capable of opposing the barbarians. This being agreed to, Stilicho immediately set out for Rhætia, where the most considerable body of the Roman forces at that time was, and collected his troops with the utmost diligence. But in the mean time Honorius was in the greatest danger; having been obliged to take refuge in the town of Asta in Piedmont. To this place the Goths instantly laid siege, and a capitulation had been proposed, when the drooping spirits of Honorius were at once revived by the arrival of Stilicho, whom he had so long expected. The Goths were now besieged in their turn, and obliged to come to a decisive battle at Pollentia. The engagement lasted the whole day; but at last the Goths were compelled to retreat. Their camp was instantly invested; their entrenchments forced with great slaughter; the wife of Alaric was taken, with all the wealth which had been amassed in plundering Greece; while many thousands of Roman prisoners were released from the most deplorable slavery. The victory, however, was not so decisive but that Alaric

525
Goths defeated at
Pollentia.

Rome. Alaric continued still extremely formidable; and Stilicho chose rather to conclude a treaty with him, and allow him an annual pension, than to continue the war with vigour. Alaric, who was not very scrupulous in his observance of this treaty, in his retreat attempted to make himself master of the city of Verona: but Stilicho coming up with him near that place, gave him a terrible defeat, in which the loss was little less than it had been at Pollentia; after which he effected a retreat out of Italy, but not without the greatest difficulty and danger.

526
Honorius
retires to
Ravenna.

527
Mr Gib-
bon's ac-
count of
the revo-
lutions in
China.

Italy being thus happily delivered, Honorius entered Rome in triumph, having Stilicho along with him in the triumphal chariot. On his entry into the city, he abolished the shows of gladiators; which, though forbidden by Constantine, had been tolerated by his successors, and even by Theodosius himself, out of complaisance to the people, who were beyond measure fond of that inhuman diversion. However, soon after, the emperor was obliged to leave the metropolis and retire to Ravenna, in order to secure himself from the barbarians, who now broke in upon the empire on all sides. Such multitudes now made their appearance, that it is not a little difficult to account for their sudden emigration. Mr Gibbon accounts for it from a supposed revolution in the north-eastern parts of China. "The Chinese annals (says he), as they have been interpreted by the learned industry of the present age, may be usefully applied to reveal the secret and remote causes of the fall of the Roman empire. The extensive territory to the north of the great wall was possessed, after the flight of the Huns, by the victorious Sienpi; who were sometimes broken into independent tribes, and sometimes re-united under a supreme chief; till at length styling themselves *Topa*, or "masters of the earth," they acquired a more solid consistence, and a more formidable power. The *Topa* soon compelled the pastoral nations of the eastern desert to acknowledge the superiority of their arms; they invaded China in a period of weakness and intestine discord; and these fortunate Tartars, adopting the laws and manners of the vanquished people, founded an imperial dynasty, which reigned near 160 years over the northern provinces of the monarchy. Some generations before they ascended the throne of China, one of the *Topa* princes had enlisted in his cavalry a slave of the name of *Moko*, renowned for his valour; but who was tempted, by the fear of punishment, to desert his standard, and to range the desert at the head of 100 followers. This gang of robbers and outlaws swelled into a camp, a tribe, a numerous people, distinguished by the appellation of *Geougen*; and their hereditary chieftains, the posterity of *Moko* the slave, assumed their rank among the Scythian monarchs. The youth Toulun, the greatest of his descendants, was exercised by those misfortunes which are the school of heroes. He bravely struggled with adversity, broke the imperious yoke of the *Topa*, and became the legislator of his nation, and the conqueror of Tartary. His troops were distributed into regular bands of 100 and of 1000 men; cowards were stoned to death; the most splendid honours were proposed as the reward of valour; and Toulun, who had knowledge enough to despise the learning of China, adopted only such arts and institutions as were favourable to the military spirit of his government. His

tents, which he removed in the winter season to a more southern latitude, were pitched during the summer on the fruitful banks of the Selinga. His conquests stretched from the Corea far beyond the river Irtysh. He vanquished, in the country to the north of the Caspian sea, the nation of the Huns; and the new title of *Khan*, on *Cagan*, expressed the fame and power which he derived from this memorable victory.

"The chain of events is interrupted, or rather is concealed, as it passes from the Volga to the Vistula, through the dark interval which separates the extreme limits of the Chinese and of the Roman geography. Yet the temper of the barbarians, and the experience of successive emigrations, sufficiently declare, that the Huns, who were oppressed by the arms of the Geougen, soon withdrew from the presence of an insulting victor. The countries towards the Euxine were already occupied by their kindred tribes; and their hasty flight, which they soon converted into a bold attack, would more naturally be directed towards the rich and level plains through which the Vistula gently flows into the Baltic sea. The north must again have been alarmed and agitated by the invasion of the Huns; and the nations who retreated before them must have pressed with incumbent weight on the confines of Germany. The inhabitants of those regions which the ancients have assigned to the Suevi, the Vandals, and the Burgundians, might embrace the resolution of abandoning to the fugitives of Sarmatia their woods and morasses; or at least of discharging their superfluous numbers on the provinces of the Roman empire. About four years after the victorious Toulun had assumed the title of *khan* of the *Geougen*, another barbarian, the haughty Rhodogast, or Radagaisus, marched from the northern extremities of Germany almost to the gates of Rome, and left the remains of his army to achieve the destruction of the west. The Vandals, the Suevi, and the Burgundians, formed the strength of this mighty host: but the Alani, who had found an hospitable reception in their new seats, added their active cavalry to the heavy infantry of the Germans; and the Gothic adventurers crowded so eagerly to the standard of Radagaisus, that by some historians he has been styled the *king of the Goths*. Twelve thousand warriors, distinguished above the vulgar by their noble birth or their valiant deeds, glittered in the van; and the whole multitude, which was not less than 200,000 fighting men, might be increased by the accession of women, of children, and of slaves, to the amount of 400,000 persons. This formidable emigration issued from the same coast of the Baltic which had poured forth the myriads of the Cimbri and Teutones to assault Rome and Italy in the vigour of the republic. After the departure of those barbarians, their native country, which was marked by the vestiges of their greatness, long ramparts, and gigantic moles, remained during some ages a vast and dreary solitude; till the human species was renewed by the powers of generation, and the vacancy was filled up by the influx of new inhabitants. The nations who now usurp an extent of land which they are unable to cultivate, would soon be afflicted by the industrious poverty of their neighbours, if the government of Europe did not protect the claims of dominion and property.

"The correspondence of nations was in that age so

Rome.

528
Radagaisus
invades
Italy with
a prodigious
army.

Rome.

imperfect and precarious, that the revolutions of the north might escape the knowledge of the court of Ravenna; till the dark cloud which was collected along the coast of the Baltic burst in thunder upon the banks of the Upper Danube. The emperor of the west, if his ministers disturbed his amusements by the news of the impending danger, was satisfied with being the occasion and the spectator of the war. The safety of Rome was intrusted to the counsels and the sword of Stilicho; but such was the feeble and exhausted state of the empire, that it was impossible to restore the fortifications of the Danube, or to prevent, by a vigorous effort, the invasion of the Germans. The hopes of the vigilant minister of Honorius were confined to the defence of Italy. He once more abandoned the provinces; recalled the troops; pressed the new levies, which were rigorously exacted, and pusillanimously eluded; employed the most efficacious means to arrest or allure the deserters; and offered the gift of freedom, and of two pieces of gold, to all the slaves who would enlist. By these efforts he painfully collected from the subjects of a great empire an army of 30,000 or 40,000 men; which, in the days of Scipio or Camillus, would have been instantly furnished by the free citizens of the territory of Rome. The 30 legions of Stilicho were reinforced by a large body of barbarian auxiliaries; the faithful Alani were personally attached to his service; and the troops of Huns and of Goths, who marched under the banners of their native princes Hulden and Sarus, were animated by interest and resentment to oppose the ambition of Radagaisus. The king of the confederate Germans passed, without resistance, the Alps, the Po, and the Appenine: leaving on one hand the inaccessible palace of Honorius, securely buried among the marshes of Ravenna; and on the other, the camp of Stilicho, who had fixed his head-quarters at Ticinum, or Pavia, but who seems to have avoided a decisive battle till he had assembled his distant forces. Many cities of Italy were pillaged, or destroyed; and the siege of Florence by Radagaisus is one of the earliest events in the history of that celebrated republic, whose firmness checked and delayed the unskillful fury of the barbarians. The senate and people trembled at their approach within 180 miles of Rome; and anxiously compared the danger which they had escaped with the new perils to which they were exposed. Alaric was a Christian and a soldier, the leader of a disciplined army; who understood the laws of war, who respected the sanctity of treaties, and who had familiarly conversed with the subjects of the empire in the same camps and the same churches. The savage Radagaisus was a stranger to the manners, the religion, and even the language, of the civilized nations of the south. The fierceness of his temper was exasperated by cruel superstition; and it was universally believed, that he had bound himself by a solemn vow to reduce the city into a heap of stones and ashes, and to sacrifice the most illustrious of the Roman senators on the altars of those gods who were appeased by human blood. The public danger, which should have reconciled all domestic animosities, displayed the incurable madness of religious faction. The oppressed votaries of Jupiter and Mercury respected, in the implacable enemy of Rome, the character of a devout pagan; loudly declared, that they were more apprehensive of the sacrifices than of the arms of Radagai-

us; and secretly rejoiced in the calamities of their country, which condemned the faith of their Christian adversaries.

"Florence was reduced to the last extremity; and the fainting courage of the citizens was supported only by the authority of St Ambrose, who had communicated in a dream the promise of a speedy deliverance. On a sudden they beheld from their walls the banners of Stilicho, who advanced with his united force to the relief of the faithful city; and who soon marked that fatal spot for the grave of the barbarian host. The apparent contradictions of those writers who variously relate the defeat of Radagaisus, may be reconciled without offering much violence to their respective testimonies. Orosius and Augustin, who were intimately connected by friendship and religion, ascribe this miraculous victory to the providence of God rather than to the valour of man. They strictly exclude every idea of chance, or even of bloodshed; and positively affirm, that the Romans, whose camp was the scene of plenty and idleness, enjoyed the distress of the barbarians, slowly expiring on the sharp and barren ridge of the hills of Fiesole, which rise above the city of Florence. Their extravagant assertion, that not a single soldier of the Christian army was killed, or even wounded, may be dismissed with silent contempt; but the rest of the narrative of Augustin and Orosius is consistent with the state of the war and the character of Stilicho. Conscious that he commanded the last army of the republic, his prudence would not expose it in the open field to the headstrong fury of the Germans. The method of surrounding the enemy with strong lines of circumvallation, which he had twice employed against the Gothic king, was repeated on a larger scale, and with more considerable effect. The examples of Cæsar must have been familiar to the most illiterate of the Roman warriors; and the fortifications of Dyrrhachium, which connected 24 castles by a perpetual ditch and rampart of 15 miles, afforded the model of an intrenchment which might confine and starve the most numerous host of barbarians. The Roman troops had less degenerated from the industry than from the valour of their ancestors; and if the servile and laborious work offended the pride of the soldiers, Tuscany could supply many thousand peasants, who would labour, though perhaps they would not fight, for the salvation of their native country.—The imprisoned multitude of horses and men was gradually destroyed by famine, rather than by the sword; but the Romans were exposed, during the progress of such an extensive work, to the frequent attacks of an impatient enemy. The despair of the hungry barbarians would precipitate them against the fortifications of Stilicho; the general might sometimes indulge the ardour of his brave auxiliaries, who eagerly pressed to assault the camp of the Germans; and these various incidents might produce the sharp and bloody conflicts which dignify the narrative of Zosimus, and the Chronicles of Prosper and Marcellinus. A seasonable supply of men and provisions had been introduced into the walls of Florence; and the famished host of Radagaisus was in its turn besieged. The proud monarch of so many warlike nations, after the loss of his bravest warriors, was reduced to confide either in the faith of a capitulation, or in the clemency of Stilicho. But the death of the royal captive, who was ignominiously beheaded, disgraced the triumph of Rome and of Christianity; and

Rome.

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Defeated
and de-
stroyed by
Stilicho.

Rome. the short delay of his execution was sufficient to brand the conqueror with the guilt of cool and deliberate cruelty. The famished Germans who escaped the fury of the auxiliaries were sold as slaves, at the contemptible price of as many single pieces of gold : but the difference of food and climate swept away great numbers of those unhappy strangers; and it was observed, that the inhuman purchasers, instead of reaping the fruit of their labour, were soon obliged to add to it the expence of interring them. Stilicho informed the emperor and the senate of his success; and deserved a second time the glorious title of *Deliverer of Italy*.

“ The fame of the victory, and more especially of the miracle, has encouraged a vain persuasion, that the whole army, or rather nation, of Germans, who migrated from the shores of the Baltic, miserably perished under the walls of Florence. Such indeed was the fate of Radagaisus himself, of his brave and faithful companions, and of more than one-third of the various multitude of Sueves and Vandals, of Alani and Burgundians, who adhered to the standard of their general. The union of such an army might excite our surprise, but the causes of separation are obvious and forcible; they were the pride of birth, the insolence of valour, the jealousy of command, the impatience of subordination, and the obstinate conflict of opinions, of interests, and of passions, among so many kings and warriors, who were untaught to yield or to obey. After the defeat of Radagaisus, two parts of the German host, which must have exceeded the number of 100,000 men, still remained in arms between the Apennine and the Alps, or between the Alps and the Danube. It is uncertain whether they attempted to revenge the death of their general: but their irregular fury was soon diverted by the prudence and firmness of Stilicho, who opposed their march, and facilitated their retreat; who considered the safety of Rome and Italy as the great object of his care, and who sacrificed with too much indifference the wealth and tranquillity of the distant provinces. The barbarians acquired, from the junction of some Pannonian deserters, the knowledge of the country and of the roads; and the invasion of Gaul, which Alaric had designed, was executed by the remains of the great army of Radagaisus.

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Account of
the remain-
der of the
army of
Radagaisus.

“ Yet if they expected to derive any assistance from the tribes of Germany who inhabited the banks of the Rhine, their hopes were disappointed. The Alemanni preserved a state of inactive neutrality; and the Franks distinguished their zeal and courage in the defence of the empire. In the rapid progress down the Rhine, which was the first act of the administration of Stilicho, he had applied himself with peculiar attention to secure the alliance of the warlike Franks, and to remove the irreconcilable enemies of peace and of the republic. Marcomir, one of their kings, was publicly convicted before the tribunal of the Roman magistrate of violating the faith of treaties. He was sentenced to a mild, but distant exile, in the province of Tuscany; and this degradation of the regal dignity was so far from exciting the resentment of his subjects, that they punished with death the turbulent Sunno, who attempted to revenge his brother, and maintained a dutiful allegiance to the princes who were established on the throne by the choice of Stilicho. When the limits of Gaul and Germany were shaken by the northern emigration, the Franks

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bravely encountered the single force of the Vandals; who, regardless of the lessons of adversity, had again separated their troops from the standard of their barbarian allies. They paid the penalty of their rashness; and 20,000 Vandals, with their king Godigisclus, were slain in the field of battle. The whole people must have been extirpated, if the squadrons of the Alani, advancing to their relief, had not trampled down the infantry of the Franks; who, after an honourable resistance, were compelled to relinquish the unequal contest. The victorious confederates pursued their march; and on the last day of the year, in a season when the waters of the Rhine were most probably frozen, they entered without opposition the defenceless provinces of Gaul. This memorable passage of the Suevi, the Vandals, the Alani, and the Burgundians, who never afterwards retreated, may be considered as the fall of the Roman empire in the countries beyond the Alps; and the barriers, which had so long separated the savage and the civilized nations of the earth, were from that fatal moment levelled with the ground.

“ While the peace of Germany was secured by the attachment of the Franks and the neutrality of the Alemanni, the subjects of Rome, unconscious of their approaching calamities, enjoyed a state of quiet and prosperity, which had seldom blessed the frontiers of Gaul. Their flocks and herds were permitted to graze in the pastures of the barbarians; their huntsmen penetrated, without fear or danger, into the darkest recesses of the Hercynian wood. The banks of the Rhine were crowned, like those of the Tiber, with elegant houses and well cultivated farms; and if a poet descended the river, he might express his doubt on which side was situated the territory of the Romans. This scene of peace and plenty was suddenly changed into a desert, and the prospect of the smoking ruins could alone distinguish the solitude of nature from the desolation of man. The flourishing city of Mentz was surprised and destroyed; and many thousand Christians were inhumanly massacred in the church. Worms perished after a long and obstinate siege: Strasburg, Spire, Rheims, Tournay, Aras, Amiens, experienced the cruel oppression of the German yoke; and the consuming flames of war spread from the banks of the Rhine over the greatest part of the 17 provinces of Gaul. That rich and extensive country, as far as the Ocean, the Alps, and the Pyrenees, was delivered to the barbarians, who drove before them, in a promiscuous crowd, the bishop, the senator, and the virgin, laden with the spoils of their houses and altars.”

Rome.
531
The Van-
dals defeat-
ed by the
Franks.

532
Gaul rava-
ged by the
barbarians.

In the midst of these calamities a revolt happened in Britain, where one Constantine, a common soldier, was raised to the imperial throne, merely for the sake of his name. However, he seems to have been a man of considerable abilities, and by no means unfit for the high dignity to which he was raised. He governed Britain with great prosperity; passed over into Gaul and Spain, the inhabitants of which submitted without opposition, being glad of any protector whatever from the barbarians. Honorius, incapable of defending the empire, or repressing the revolt, was obliged to acknowledge him for his partner in the empire. In the mean time, Alaric, with his Goths, threatened a new invasion unless he was paid a certain sum of money. Stilicho is said to have occasioned this demand, and to have insist-

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Revolt of
Constantine, whom
Honorius
acknow-
ledges as
his partner
in the em-
pire.

Rome.

534
Stilicho disgraced and put to death.

ed upon sending him the money he demanded; and this was the cause of his disgrace and death, which happened soon after, with the extirpation of his family and friends. Nay, such was the general hatred of this unfortunate minister, that the soldiers quartered in the cities of Italy no sooner heard of his death, than they murdered the wives and children of the barbarians whom Stilicho had taken into the service of Honorius. The enraged husbands went over to Alaric, who made a new demand of money; which not being readily sent, he laid siege to Rome, and would have taken it, had not the emperor complied with his demand. The ransom of the city was 5000 pounds of gold, 30,000 of silver, 4000 silk garments, 3000 skins dyed purple, and 3000 pounds of pepper. On this occasion the heathen temples were stripped of their remaining ornaments, and among others of the statue of Valour; which the pagans did not fail to interpret as a presage of the speedy ruin of the state.

535
Rome taken and plundered by Alaric.

Alaric having received this treasure, departed for a short time: but soon after he again blocked up the city with a numerous army; and again an accommodation with Honorius was set on foot. However, for some reasons which do not clearly appear, the treaty was broken off, Rome was a third time besieged, and at last taken and plundered. Alaric, when upon the point of breaking into the city, addressing his soldiers, told them, that all the wealth in it was theirs, and therefore he gave them full liberty to seize it; but at the same time he strictly enjoined them to shed the blood of none but such as they should find in arms; and above all, to spare those who should take sanctuary in the holy places, especially in the churches of the apostles St Peter and St Paul; which he named, because they were most spacious, and consequently capable of affording an asylum to great numbers of people. Having given these orders, he abandoned the city to his Goths, who treated it no better, according to St Jerome, than the Greeks are said to have treated ancient Troy; for after having plundered it for the space of three, or, as others will have it, of six days, they set fire to it in several places; so that the stately palace of Sallust, and many other magnificent buildings, were reduced to ashes; nay, Procopius writes, that there was not in the whole city one house left entire; and both St Jerome and Philostorgius assert, that the great metropolis of the empire was reduced to an heap of ashes and ruins. Though many of the Goths, pursuant to the orders of their general, refrained from shedding the blood of such as made no resistance; yet others, more cruel and blood-thirsty, massacred all they met: so that the streets in some quarters of the city were seen covered with dead bodies, and swimming in blood. However, not the least injury was offered to those who fled to the churches; nay, the Goths themselves conveyed thither, as to places of safety, such as they were desirous should be spared. Many of the statues of the gods that had been left entire by the emperors as excellent pieces of art, were on this occasion destroyed, either by the Goths, who, though mostly Arians, were zealous Christians, or by a dreadful storm of thunder and lightning which fell at the same time upon the city, as if it had been sent on purpose to complete with them the destruction of idolatry, and abolish the small remains of pagan superstition. However, notwithstanding these accounts, some affirm that

the city suffered very little at this time, not so much as when it was taken by Charles V.

Rome.

536
Death of that conqueror.

Alaric did not long survive the taking of Rome, being cut off by a violent fit of sickness in the neighbourhood of Rhegium. After his death the affairs of Honorius seemed a little to revive by the defeat and death of Constantine and some other usurpers; but the provinces of Gaul, Britain, and Spain, were now almost entirely occupied by barbarians; in which state they continued till the death of Honorius, which happened in the year 423, after an unfortunate reign of 28 years.

After some usurpations which took place on the death of Honorius, his nephew Valentinian III. was declared emperor of the west, and his mother Placidia regent during his minority. He was scarce seated on the throne, when the empire was attacked by the Huns under the celebrated Attila. The Romans, however, wretched and degenerate as they were, had they been unanimous, would even yet have been superior to their enemies. The empress then had two celebrated generals, Bonifacius and Aetius; who by their union might have saved the empire: but unhappily, through the treachery of Aetius, Bonifacius was obliged to revolt; and a civil war ensued, in which he lost his life. Aetius, however, notwithstanding his treachery, was pardoned, and put at the head of the forces of the empire. He defended it against Attila with great spirit and success, notwithstanding the deplorable situation of affairs, till he was murdered by Valentinian with his own hand, on a suspicion that he aspired to the empire. But in the mean time the provinces, except Italy itself, were totally over-run by the barbarians. Genferic king of the Vandals ravaged Africa and Sicily; the Goths, Suevians, Burgundians, &c. had taken possession of Gaul and Spain; and the Britons were oppressed by the Scots and Picts, so that they were obliged to call in the Saxons to their assistance, as is related under the article ENGLAND. In the year 455, Valentinian was murdered by one Maximus, whose wife he had ravished. Maximus immediately assumed the empire; but felt such violent anxieties, that he designed to resign it and fly out of Italy, in order to enjoy the quiet of a private life. However, being dissuaded from this by his friends, and his own wife dying soon after, he forced the empress Eudoxia to marry him. Eudoxia, who had tenderly loved Valentinian, provoked beyond measure at being married to his murderer, invited Genferic king of the Vandals into Italy. This proved a most fatal scheme: for Genferic immediately appeared before Rome; a violent tumult ensued, in which Maximus lost his life; and the city was taken and plundered by Genferic, who carried off what had been left by the Goths. A vessel was loaded with costly statues; half the covering of the capitol, which was of brass plated over with gold; sacred vessels enriched with precious stones; and those which had been taken by Titus out of the temple of Jerusalem; all of which were lost with the vessel in its passage to Africa.

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Rome taken and plundered by Genferic,

Nothing could now be more deplorable than the state of the Roman affairs: nevertheless, the empire continued to exist for some years longer; and even seemed to revive for a little under Marjorianus, who was declared emperor in 458. He was a man of great courage, and possessed of many other excellent qualities. He defeated

Rome. defeated the Vandals, and drove them out of Italy. With great labour he fitted out a fleet, of which the Romans had been long destitute. With this he designed to pass over into Africa; but, it being surprised and burnt by the enemy, he himself was soon after murdered by one Ricimer a Goth, who had long governed every thing with an absolute sway. After the death of Marjorianus, one Anthemius was raised to the empire; but beginning to counteract Ricimer, the latter openly revolted, besieged and took Rome; where he committed innumerable cruelties, among the rest putting to death the unhappy emperor Anthemius, and raising one Olybius to the empire. The transactions of his reign were very few, as he died soon after his accession. On his death, one Glycerius usurped the empire. He was deposed in 474, and one Julius Nepos had the name of emperor. He was driven out the next year by his general Orestes, who caused his son Augustus or Augustulus to be proclaimed emperor. But the following year, 476, the barbarians who served in the Roman armies, and were distinguished with the title of allies, demanded, as a reward for their services, the third part of the lands in Italy; pretending, that the whole country, which they had so often defended, belonged of right to them. As Orestes refused to comply with this insolent demand, they resolved to do themselves justice, as they called it; and, openly revolting, chose one Odoacer for their leader. Odoacer was, according to Ennodius, meanly born, and only a private man in the guards of the emperor Augustulus, when the barbarians revolting, chose him for their leader. However, he is said to have been a man of uncommon parts, equally capable of commanding an army and governing a state. Having left his own country when he was yet very young, to serve in Italy, as he was of a stature remarkably tall, he was admitted among the emperor's guards, and continued in that station till the present year; when, putting himself at the head of the barbarians in the Roman pay, who, though of different nations, had, with one consent, chosen him for their leader, he marched against Orestes and his son Augustulus, who still refused to give them any share of the lands in Italy.

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Total failure of the empire. As the Roman troops were inferior, both in number and valour, to the barbarians, Orestes took refuge in Pavia, at that time one of the best fortified cities in Italy; but Odoacer, investing the place without loss of time, took it soon after by assault, gave it up to be plundered by the soldiers, and then set fire to it; which reduced most of the houses, and two churches, to ashes. Orestes was taken prisoner, and brought to Odoacer, who carried him to Placentia, and there caused him to be put to death, on the 28th of August, the day on which he had driven Nepos out of Ravenna, and obliged him to abandon the empire. From Placentia, Odoacer marched straight to Ravenna, where he found Paul, the brother of Orestes, and the young emperor Augustulus. The former he immediately put to death; but sparing Augustulus, in consideration of his youth, he stripped him of the ensigns of the imperial dignity, and confined him to Lucullanum, a castle in Campania; where he was, by Odoacer's orders, treated with great humanity, and allowed an handsome maintenance to support himself and his relations. Rome readily submitted to the conqueror, who immediately caused

himself to be proclaimed king of Italy, but would not assume the purple, or any other mark of the imperial dignity. Thus failed the very name of an empire in the West. Britain had been long since abandoned by the Romans; Spain was held by the Goths and Suevans; Africa, by the Vandals; the Burgundians, Goths, Franks, and Alans, had erected several tetrarchies in Gaul; at length Italy itself, with its proud metropolis, which for so many ages had given law to the rest of the world, was enslaved by a contemptible barbarian, whose family, country, and nation, are not well known to this day.

From this time, Rome has ceased to be the capital of an empire; the territories of the pope, to whom the city is now subject, being inconsiderable. The origin of the pope's temporal power, and the revolutions of Italy, are related under the article ITALY; and a sketch of the spiritual usurpations of the popes may be seen under the articles HISTORY, sect. ii. and REFORMATION; and likewise under the various historical articles as they occur in the course of this work.

It is thought that the walls of modern Rome take in nearly the same extent of ground as the ancient; but the difference between the number of buildings on this spot is very great, one half of modern Rome lying waste, or occupied with gardens, fields, meadows, and vineyards. One may walk quite round the city in three or four hours at most, the circumference being reckoned about 13 Italian miles. With regard to the number of the inhabitants, modern Rome is also greatly inferior to the ancient: for, in 1709, the whole of these amounted only to 138,568; among which were 40 bishops, 2686 priests, 3559 monks, 1814 nuns, 393 courtisans, about 8000 or 9000 Jews, and 14 Moors. In 1714, the number was increased to 143,000. In external splendor, and the beauty of its temples and palaces, modern Rome is thought by the most judicious travellers to excel the ancient. There was nothing in ancient Rome to be compared with St Peter's church in the modern. That Rome was able to recover itself after so many calamities and devastations, will not be matter of surprise, if we consider the prodigious sums that it has so long annually drawn from all countries of the Popish persuasion. These sums, though still considerable, have been continually decreasing since the Reformation. The surface of the ground on which Rome was originally founded is surprisingly altered. At present it is difficult to distinguish the seven hills on which it was first built, the low grounds being almost filled up with the ruins of the ancient streets and houses, and the great quantities of earth washed down from the hills by the violence of the rains. Anciently the suburbs extended a vast way on all sides, and made the city appear almost boundless; but it is quite otherwise now, the country about Rome being almost a desert. To this and other causes it is owing, that the air is none of the most wholesome, especially during the summer heats, when few go abroad in the day-time. No city at present in the world surpasses, or indeed equals, Rome, for the multiplicity of fine fountains, noble edifices, antiquities, curiosities, paintings, statues, and sculptures. The city stands on the Tiber, 10 miles from the Tuscan sea, 380 from Vienna, 560 from Paris, 740 from Amsterdam, 810 from London, and 900 from Madrid. The Tiber is subject to fre-

Rome.

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Description of modern Rome.

Rome.

quent inundations, by which it often does great damage. A small part of the city is separated from the other by the river, and is therefore called *Trastevere*, or beyond the Tiber. There are several bridges over the river, a great number of towers on the walls, and 20 gates. The remains of Rome's ancient grandeur consist of statues, colossuses, temples, palaces, theatres, naumachias, triumphal arches, circuses, columns, obelisks, fountains, aqueducts, mausoleums, thermæ or hot-baths, and other structures. Of modern buildings, the splendid churches and palaces are the most remarkable. Mr Addison says, it is almost impossible for a man to form in his imagination such beautiful and glorious scenes as are to be met with in several of the Roman churches and chapels. This gentleman tells us also, that no part of the antiquities of Rome pleased him so much as the ancient statues, of which there is still an incredible variety. Next to the statues, he says, there is nothing more surprising than the amazing variety of ancient pillars of so many kinds of marble. Rome is said to be well paved; but not well lighted, nor kept very clean. Two-thirds of the houses are the property of the churches, convents, and alms houses. Protestants are not obliged to kneel at the elevation of the host, or at meeting the eucharist in the streets; and they may have flesh-meat always at the inns, even during Lent. Here are many academies for promoting arts and sciences, besides the university. The carnival here is only during the eight days before Lent, and there are no such scenes of riot as at Venice: prostitutes, however, are publicly tolerated. To maintain good order, there is a body of 300 Sbirri, or Halberdeers, under their barigella, or colonel. There is little or no trade carried on in Rome, but a vast deal of money is spent by travellers and other strangers. The principal modern structures are the church of St Peter, and the other churches; the aqueducts and fountains; the Vatican, and the other palaces; the Campidoglio, where the Roman senate resides, &c. The principal remains of antiquity are the pila miliaria of fine marble; the equestrian brass statue of Marcus Aurelius Antoninus; the marble monument of the emperor Alexander Severus; marble busts of the emperors and their consorts; three brick arches of the temple of Peace, built by the emperor Vespasian; the triumphal arch of Septimus Severus and of Gallienus; the circus of Antoninus Caracalla; some parts of the cloaca-maxima; the columna Antonina, representing the principal actions of Marcus Aurelius; the columna Trajani, or Trajan's pillar; some fragments of the curia, or palace of Antoninus Pius, and of Nerva's forum; the mausoleum of Augustus, in the Strada Pontifici; the remains of the emperor Severus's tomb without St John's gate; the pyramid of Caius Cestus near St Paul's gate; the porphyry coffin of St Helen, and the original statue of Constantine the Great, in the church of St John of Lateran: a font of oriental granite, in the chapel of St Giovanni in fonte, said to have been erected by Constantine the Great; an Egyptian obelisk near the church of St Maria Maggiore; the stately remains of Dioclesian's baths; the celebrated Pantheon; the obelisks of Sesostris and Augustus by the Clementine college; the church of St Paul fuori della Mura, said to have been built by Constantine the Great; the Farnese Hercu-

les, in white marble, of a Colossian size and exquisite workmanship, in a court of the Farnese palace, and an admirable group cut out of one block of marble, in another court of the same palace. Besides these there are a great many more, which our bounds will not allow us to take any further notice of. Here is a great number of rich and well-regulated hospitals. Near the church of St Sebastiano alle Catacombe, are the most spacious of the catacombs, where the Christians, who never burned their dead, and such of the Pagan Romans as could not afford the expence of burning, were buried. Along the Via Appia, without St Sebastian's gate, were the tombs of the principal families of Rome, which at present are used for cellars and store-houses by the gardeners and vine-dressers.

ROMNEY, a town of Kent in England. It is one of the cinque-port towns, and is seated on a marsh of the same name, famous for feeding cattle; but the air is very unhealthy. It was once a large and populous place, but the retiring of the sea has reduced it very much; however, it sends two members to parliament.

ROMORENTIN, is a small town situated on the river Saure, in the territory of Blaisois in France, famous for its woollen manufacture. It is said to be a very ancient place; and the inhabitants pretend that Cæsar built a tower here, of which there are still some considerable remains. They have a manufacture of serge and cloth, which is used for the clothing of the troops.

ROMPEE, or ROMPU, in heraldry, is applied to ordinaries that are represented as broken; and to chevrons, bends, or the like, whose upper points are cut off.

ROMULUS, the founder and first king of Rome. See ROME, n° 14.

RONCIGLIONE, is a town of Italy, in the Ecclesiastic State, and Patrimony of St Peter, in E. Long. 13. N. Lat. 42. 12. It is a small place, but had a pretty good trade, and was one of the richest in the province, while it belonged to the dukes of Parma, which was till 1649, when pope Innocent X. became master of it, and it has ever since continued in the possession of his successors.

RONDELETIA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants; and in the natural method ranking with those of which the order is doubtful. The corolla is funnel-shaped; the capsule bilocular, inferior, and polyspermous, roundish and crowned.

RONA, one of the Hebrides islands, is reckoned about 20 leagues distant from the north-east point of Nefs in Lewis—about a mile long, and half a mile broad. It has a hill in the west part, and is only visible from Lewis in a fair summer's day. There is a chapel in the island dedicated to St Ronan, fenced with a stone wall round it. This church the natives take care to keep very neat and clean, and sweep it every day. There is an altar in it, on which there lies a big plank of wood about 10 feet long. Every foot has a hole in it, and in every hole is a stone, to which the natives ascribe several virtues; one of them is singular (as they say) for promoting speedy delivery to a woman in travel. The inhabitants are extremely ignorant, and very superstitious. See *Martin's Description*.

RON-

Romney

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Rona.

Ronfard.

Ronfard.

RONsARD (Peter de) was born at the castle of Poissoniere in Vendomois in 1524. He was descended of a noble family, and was educated at Paris in the college of Navarre. Academical pursuits not suiting his genius, he left college, and became pagé to the duke of Orleans, who resigned him to James Stuart, king of Scots, married to Magdalene of France. Ronfard continued in Scotland with King James upwards of two years, and afterwards went to France, where he was employed by the duke of Orleans in several negociations. He accompanied Lazarus de Baif to the diet of Spires. Having from the conversation of this learned man imbibed a passion for the belles-lettres, he studied the Greek language with Baif's son under Dorat. It is reported of Ronfard, that his practice was to study till two o'clock in the morning; and when he went to bed, to awaken Baif, who resumed his place. The muses possessed in his eyes an infinity of charms; and he cultivated them with such success, that he acquired the appellation of the *Prince of the Poets* of his time. Henry II. Francis II. Charles IX. and Henry III. loaded him with favours. Having gained the first prize of the *Jeux Floraux*, they thought the reward promised below the merit of the work, and the reputation of the poet. The city of Toulouse caused a Minerva of massy silver of considerable value to be made and sent to him. This present was accompanied with a decree, declaring him *The French Poet*, by way of distinction. Ronfard afterwards made a present of his Minerva to Henry II. and this monarch appeared as much elated with this mark of the poet's esteem for him, as the poet himself could have been had he received the present from his sovereign. Mary, the beautiful and unfortunate queen of Scots, who was equally sensible of his merit with the Toulonese, gave him a very rich set of table-plate, among which was a vessel in the form of a rose-bush, representing Mount Parnassus, on the top of which was a Pegasus with this inscription:

A Ronfard, l'Apollon de la source des muses.

From the above two anecdotes of him may easily be inferred the reputation in which he was held, and which he continued to keep till Malherbe appeared. His works possess both invention and genius; but his affectation of everywhere thrusting in his learning, and of forming words from the Greek, the Latin, and the different provincialisms of France, has rendered his versification disagreeable and often unintelligible.

*Ronfard, dit Despréaux, par une autre méthode,
Reglant tout, brouilla tout, fit un art à sa mode;
Et toutefois long temps eut un heureux destin;
Mais sa muse, en François parlant Grec et Latin,
Vit dans l'âge suivant, par un retour grotesque,
Tomber de ses grands mots le faste pédantesque.*

He wrote hymns, odes, a poem called the *Franciad*, eclogues, epigrams, sonnets, &c. In his odes he takes bombast for poetical raptures. He wishes to imitate Pindar; and by labouring too much for lofty expressions, he loses himself in a cloud of words. He is obscure and harsh to the last degree: faults which he might easily have avoided by studying the works of Marot, who had before he wrote brought French poetry very near to perfection. "Marot's turn and style

of composition are such (says Bruyere), that he seems to have written after Ronfard: there is hardly any difference, except in a few words, between Marot and us. Ronfard, and the authors his contemporaries, did more disservice than good to style: they checked its course in the advances it was making towards perfection, and had like to have prevented its ever attaining it. It is surprising that Marot, whose works are so natural and easy, did not make Ronfard, who was fired with the strong enthusiasm of poetry, a greater poet than either Ronfard or Marot." But what could be expected from a man who had so little taste, that he called Marot's works 'a dunghill, from which rich grains of gold by industrious working might be drawn?' As a specimen of our author's intolerable and ridiculous affectation of learning, which we have already censured, Boileau cites the following verse of Ronfard to his mistress: *Êtes-vous pas ma seule entelechie?* 'are not you my only entelechia?' Now *entelechia* is a word peculiar to the peripatetic philosophy, the sense of which does not appear to have ever been fixed. Hermalaus Barbarus is said to have had recourse to the devil, in order to know the meaning of this new term used by Aristotle; but he did not gain the information he wanted, the devil, probably to conceal his ignorance, speaking in a faint and whispering sort of voice. What could Ronfard's mistress therefore, or even Ronfard himself, know of it; and, what can excuse in a man of real genius the low affectation of using a learned term, because in truth nobody could understand it. He has, however, some pieces not destitute of real merit; and there are perhaps few effusions of the French muse more truly poetical than his *Four Seasons of the Year*, where a most fertile imagination displays all its riches.

Ronfard, though it is doubtful whether he ever was in orders, held several benefices in commendam; and he died at Saint-Cosme-les-Tours, one of these, December 27. 1585, being then 61 years of age. He appeared more ridiculous as a man than as a poet: he was particularly vain. He talked of nothing but his family and his alliances with crowned heads. In his panegyrics, which he addresses to himself without any ceremony, he has the vanity to pretend, that from *Ronfard* is derived the word *Resignol*, to denote both a musician and a poet together. He was born the year after the defeat of Francis I. before Pavia: "Just as heaven (said he) wished to indemnify France for the losses it had sustained at that place." He blushed not to tell of his intrigues. All the ladies sought after him; but he never said that any of them gave him a denial of their favours. His immoderate indulgence in pleasure, joined to his literary labours, served to hasten his old age. In his 50th year he was weak and valetudinary, and subject to attacks of the gout. He retained his wit, his vivacity, and his readiness at poetic composition, to his last moments. Like all those who aspire after public esteem, he had a great number of admirers and some enemies. Though Melin de Saint-Gelais railed at him continually, Rabelais was the person whom he most dreaded. He took always care to inform himself where that jovial rector of Meudon went, that he might not be found in the same place with him. It is reported, that Voltaire acted a similar part with regard to Peron*, * See *Pi-* of whose extemporary fallies and *bon mots* he was much *ron-* afraid.

Roof.
Roof.

afraid. Ronfard's poems appeared in 1567 at Paris in 6 vols 4to, and in 1604 in 10 vols 12mo.

ROOD, a quantity of land equal to 40 square perches, or the fourth part of an acre.

1
Definition.

ROOF, expresses the covering of a house or building, by which its inhabitants or contents are protected from the injuries of the weather. It is perhaps the essential part of a house, and is frequently used to express the whole. To *come under a person's roof*, is to enjoy his protection and society, to dwell with him. *Tectum* was used in the same sense by the Romans. To be within our walls rather expresses the being in our possession: a roof therefore is not only an essential part of a house, but it even seems to be its characteristic feature. The Greeks, who have perhaps excelled all nations in taste, and who have given the most perfect model of architectonic ordonnance within a certain limit, never erected a building which did not exhibit this part in the distinctest manner; and though they borrowed much of their model from the orientals, as will be evident to any who compares their architecture with the ruins of Persepolis, and of the tombs in the mountains of Sciras, they added that form of roof which their own climate taught them was necessary for sheltering them from the rains. The roofs in Persia and Arabia are flat, but those of Greece are without exception sloping. It seems therefore a gross violation of the true principles of taste in architecture (at least in the regions of Europe), to take away or to hide the roof of a house; and it must be ascribed to that rage for novelty which is so powerful in the minds of the rich. Our ancestors seemed to be of a very different opinion, and turned their attention to the ornamenting of their roofs as much as any other part of a building. They showed them in the most conspicuous manner, running them up to a great height, broke them into a thousand fanciful shapes, and stuck them full of highly dressed windows. We laugh at this, and call it Gothic and clumsy; and our great architects, not to offend any more in this way, conceal the roof altogether by parapets, balustrades, and other contrivances. Our forefathers certainly did offend against the maxims of true taste, when they enriched a part of a house with marks of elegant habitation, which every spectator must know to be a cumbersome garret: but their successors no less offend, who take off the cover of the house altogether, and make it impossible to know whether it is not a mere skreen or colonnade we are looking at.

3
Error of
Sir Christo-
pher Wren
in the roof
of St Pau
London.

We cannot help thinking that Sir Christopher Wren erred when he so industriously concealed the roof of St Paul's church in London. The whole of the upper order is a mere screen. Such a quantity of wall would have been intolerably offensive, had he not given it some appearance of habitation by the mock windows or niches. Even in this state it is gloomy, and it is odd, and is a puzzle to every spectator—There should be no puzzle in the design of a building any more than in a discourse. It has been said that the double roof of our great churches which have aisles is an incongruity, looking like a house standing on the top of another house. But there is not the least occasion for such a thought. We know that the aisle is a shed, a cloister. Suppose only that the lower roof or shed is hidden by a balustrade, it then becomes a portico, against which the connoisseur has no objection: yet there is no diffe-

rence; for the portico must have a cover, otherwise it is neither a shed, cloister, nor portico, any more than a building without a roof is a house. A house without a visible roof is like a man abroad without his hat; and we may add, that the whim of concealing the chimneys, now so fashionable, changes a house to a barn or storehouse. A house should not be a copy of any thing. It has a title to be an original; and a screen-like house and a pillar-like candlestick are similar solecisms in taste.

The architect is anxious to present a fine object, and a very simple outline discusses all his concerns with the roof. He leaves it to the carpenter, whom he frequently puzzles (by his arrangements) with coverings almost impossible to execute. Indeed it is seldom that the idea of a roof is admitted by him into his great compositions; or if he does introduce it, it is from mere affectation, and we may say pedantry. A pediment is frequently stuck up in the middle of a grand front, in a situation where a roof cannot perform its office; for the rain that is supposed to flow down its sides must be received on the top of the level buildings which flank it. This is a manifest incongruity. The tops of dressed windows, trifling porches, and sometimes a projecting portico, are the only situations in which we see the figure of a roof correspond with its office. Having thus lost sight of the principle, it is not surprising that the draughtsman (for he should not be called architect) runs into every whim: and we see pediment within pediment, a round pediment, a hollow pediment, and the greatest of all absurdities, a broken pediment. Nothing could ever reconcile us to the sight of a man with a hat without its crown, because we cannot overlook the use of a hat.

But when one builds a house, ornament alone will not do. We must have a cover; and the enormous expense and other great inconveniences which attend the concealment of this cover by parapets, balustrades, and screens, have obliged architects to consider the pent roof as admissible, and to regulate its form. Any man of sense, not under the influence of prejudice, would be determined in this by its fitness for answering its purpose. A high pitched roof will undoubtedly shoot off the rains and snows better than one of a lower pitch. The wind will not so easily blow the dropping rain in between the slates, nor will it have so much power to strip them off. A high pitched roof will exert a smaller thrust on the walls, both because its strain is less horizontal, and because it will admit of lighter covering. But it is more expensive, because there is more of it. It requires a greater size of timbers to make it equally strong, and it exposes a greater surface to the wind.

There have been great changes in the pitch of roofs: our forefathers made them very high, and we make them very low. It does not, however, appear, that this change has been altogether the effect of principle. In the simple unadorned habitations of private persons, every thing comes to be adjusted by an experience of inconveniences which have resulted from too low pitched roofs; and their pitch will always be nearly such as suits the climate and covering. Our architects, however, go to work on different principles. Their professed aim is to make a beautiful object. The sources of the pleasures arising from what we call *taste* are so various, so complicated, and even so whimsical, that it

Roof.

4
Little at-
tention
paid by
architects
to this part
of a build-
ing.5
Advantages
of a high
pitched
roof.6
Remarks
on the
changes in
the pitch of
roofs.

Roof.

Roof.

7
And of the
Greek ar-
chitecture
of them.

is almost in vain to look for principle in the rules adopted by our professed architects. We cannot help thinking, that much of their practice results from a *pedantic* veneration for the beautiful productions of Grecian architecture. Such architects as have written on the principles of the art in respect of proportions, or what they call the *ORDONNANCE*, are very much puzzled to make a chain of reasoning; and the most that they have made of the Greek architecture is, that it exhibits a nice adjustment of strength and strain. But when we consider the extent of this adjustment, we find that it is wonderfully limited. The whole of it consists of a basement, a column, and an entablature; and the entablature, it is true, exhibits something of a connection with the framework and roof of a wooden building; and we believe that it really originated from this in the hands of the orientals, from whom the Greeks certainly borrowed their forms and their combinations. We could easily show in the ruins of Persepolis, and among the tombs in the mountains (which were long prior to the Greek architecture), the fluted column, the base, the Ionic and Corinthian capital, and the Doric arrangement of lintels, beams, and rafters, all derived from unquestionable principle. The only addition made by the Greeks was the pent roof; and the changes made by them in the subordinate forms of things are such as we should expect from their exquisite judgment of beauty.

But the whole of this is very limited; and the Greeks, after making the roof a chief feature of a house, went no farther, and contented themselves with giving it a slope suited to their climate. This we have followed, because in the milder parts of Europe we have no cogent reason for deviating from it; and if any architect should deviate greatly in a building where the outline is exhibited as beautiful, we should be disgusted; but the disgust, though felt by almost every spectator, has its origin in nothing but habit. In the professed architect or man of education, the disgust arises from pedantry: for there is not such a close connection between the form and uses of a roof as shall give precise determinations; and the mere form is a matter of indifference.

8
Difference
Between
the ancient
Greeks and
modern
roofs.

We should not therefore reprobate the high-pitched roofs of our ancestors, particularly on the continent. It is there where we see them in all the extremity of the fashion, and the taste is by no means exploded as it is with us. A baronial castle in Germany and France is seldom rebuilt in the pure Greek style, or even like the modern houses in Britain; the high-pitched roofs are retained. We should not call them Gothic, and ugly because Gothic, till we show their principle to be false or tasteless. Now we apprehend that it will be found quite the reverse; and that though we cannot bring ourselves to think them beautiful, we ought to think them so. The construction of the Greek architecture is a transference of the practices that are necessary in a wooden building to a building of stone. To this the Greeks have adhered, in spite of innumerable difficulties. Their marble quarries, however, put it in their power to retain the proportions which habit had rendered agreeable. But it is next to impossible to adhere to these proportions with freestone or brick, when the order is of magnificent dimensions. Sir Christopher Wren saw this; for his mechanical knowledge was equal to his taste. He composed the front of St Paul's church

in London of two orders, and he coupled his columns; and still the lintels which form the architrave are of such length that they could carry no additional weight, and he was obliged to truss them behind. Had he made but one order, the architrave could not have carried its own weight. It is impossible to execute a Doric entablature of this size in brick. It is attempted in a very noble front, the Academy of Arts in St Petersburg. But the architect was obliged to make the mutules and other projecting members of the cornice of granite, and many of them broke down by their own weight.

Here is surely an error in principle. Since stone is the chief material of our buildings, ought not the members of ornamented architecture to be refinements on the essential and unaffected parts of a simple stone-building. There is almost as much propriety in the architecture of India, where a dome is made in imitation of a lily or other flower inverted, as in the Greek imitation of a wooden building. The principles of masonry, and not of carpentry, should be seen in our architecture, if we would have it according to the rules of just taste. Now we affirm that this is the characteristic feature of what is called the Gothic architecture. In this no dependence is had on the transverse strength of stone. No lintels are to be seen; no extravagant projections. Every stone is pressed to its neighbours, and none is exposed to a transverse strain. The Greeks were enabled to execute their colossal buildings only by using immense blocks of the hardest materials. The Norman mason could raise a building to the skies without using a stone which a labourer could not carry to the top on his back. Their architects studied the principles of equilibrium; and having attained a wonderful knowledge of it, they indulged themselves in exhibiting remarkable instances. We call this false taste, and say that the appearance of insecurity is the greatest fault. But this is owing to our habits: our thoughts may be said to run in a wooden train, and certain simple maxims of carpentry are familiar to our imagination; and in the careful adherence to these consists the beauty and symmetry of the Greek architecture. Had we been as much habituated to the equilibrium of pressure, this apparent insecurity would not have met our eye: we would have perceived the strength, and we should have relished the ingenuity.

9
And the ef-
fect of our
using stone.

The Gothic architecture is perhaps intitled to the name of rational architecture, and its beauty is founded on the characteristic distinction of our species. It deserves cultivation: not the pitiful, servile, and unskilled copying of the monuments; this will produce incongruities and absurdities equal to any that have crept into the Greek architecture: but let us examine with attention the nice disposition of the groins and spandrels; let us study the tracery and knots, not as ornaments, but as useful members; let us observe how they have made their walls like honey-combs, and admire their ingenuity as we pretend to admire the instinct infused by the great architect into the bee. All this cannot be understood without mechanical knowledge; a thing which few of our professional architects have any share of. Thus would architectonic taste be a mark of skill; and the person who presents the design of a building would know how to excite it, without committing it entirely to the mason and carpenter.

10
Rational
nature of
the Gothic
architec-
ture.

These observations are not a digression from our subject.

¹¹ **Roof.** **ject.** The same principles of mutual pressure and equilibrium have a place in roofs and many wooden edifices; and if they had been as much studied as the Normans and Saracens seem to have studied such of them as were applicable to their purposes, we might have produced wooden buildings as far superior to what we are familiarly acquainted with, as the bold and wonderful churches still remaining in Europe are superior to the timid productions of our stone architecture. The ceintres used in building the bridge of Orleans and the corn-market of Paris, are late instances of what may be done in this way. The last mentioned is a dome of 200 feet diameter, built of fir planks; and there is not a piece of timber in it more than nine feet long, a foot broad, and three inches thick.

¹¹ The Norman architects often roofed with stone.

¹² Effects of the rivalry between the masons and carpenters of ancient times.

The Norman architects frequently roofed with stone. Their wooden roofs were in general very simple, and their professed aim was to dispense with them altogether. Fond of their own science, they copied nothing from a wooden building, and ran into a similar fault with the ancient Greeks. The parts of their buildings which were necessarily of timber were made to imitate stone-buildings; and Gothic ornament consists in cramming every thing full of arches and spandrels. Nothing else is to be seen in their timber works, nay even in their sculpture. Look at any of the maces or sceptres still to be found about the old cathedrals; they are silver steeples.

But there appears to have been a rivalry in old times between the masons and the carpenters. Many of the baronial halls are of prodigious width, and are roofed with timber: and the carpenters appeared to have borrowed much knowledge from the masons of those times, and their wide roofs are frequently constructed with great ingenuity. Their aim, like the masons, was to throw a roof over a very wide building without employing great logs of timber. We have seen roofs 60 feet wide, without having a piece of timber in it above 10 feet long and 4 inches square. The Parliament House and Tron-Church of Edinburgh, the great hall of Tarnaway castle near Elgin, are specimens of those roofs. They are very numerous on the continent. Indeed Britain retains few monuments of private magnificence. Aristocratic state never was so great with us; and the rancour of our civil wars gave most of the performances of the carpenter to the flames. Westminster-hall exhibits a specimen of the false taste of the Norman roofs. It contains the essential parts indeed, very properly disposed; but they are hidden, or intentionally covered, with what is conceived to be ornamental; and this is an imitation of stone arches, crammed in between slender pillars which hang down from the principal frames, trusses, or rafters. In a pure Norman roof, such as Tarnaway hall, the essential parts are exhibited as things understood, and therefore relished. They are refined and ornamented; and it is here that the inferior kind of taste or the want of it may appear. And here we do not mean to defend all the whims of our ancestors; but we assert that it is no more necessary to consider the members of a roof as things to be concealed like a garret or privy, than the members of a ceiling, which form the most beautiful part of the Greek architecture. Should it be said that a roof is only a thing to keep off the rain, it may be answered,

that a ceiling is only to keep off the dust, or the floor to be trodden underfoot, and that we should have neither copartments in the one nor inlaid work or carpets on the other. The structure of a roof may therefore be exhibited with propriety, and made an ornamental feature. This has been done even in Italy. The church of St Maria Maggiore in Rome and several others are specimens: but it must be acknowledged, that the forms of the principal frames of these roofs, which resemble those of our modern buildings, are very unfit for agreeable ornament. As we have already observed, our imaginations have not been made sufficiently familiar with the principles, and we are rather alarmed than pleased with the appearance of the immense logs of timber which form the couples of these roofs, and hang over our heads with every appearance of weight and danger. It is quite otherwise with the ingenious roofs of the German and Norman architects. Slender timbers, interlaced with great symmetry, and thrown by necessity into figures which are naturally pretty, form altogether an object which no carpenter can view without pleasure. And why should the gentleman refuse himself the same pleasure of beholding scientific ingenuity?

¹³ The roof is in fact the part of the building which requires the greatest degree of skill, and where science will be of more service than in any other part. The architect seldom knows much of the matter, and leaves the task to the carpenter. The carpenter considers the framing of a great roof as the touchstone of his art; and nothing indeed tends so much to show his judgment and his fertility of resource.

It must therefore be very acceptable to the artist to have a clear view of the principles by which this difficult problem may be solved in the best manner, so that the roof may have all the strength and security that can be wished for, without an extravagant expence of timber and iron. We have said that mechanical science can give great assistance in this matter. We may add that the framing of carpentry, whether for roofs, floors, or any other purpose, affords one of the most elegant and most satisfactory applications which can be made of mechanical science to the arts of common life. Unfortunately the practical artist is seldom possessed even of the small portion of science which would almost insure his practice from all risk of failure; and even our most experienced carpenters have seldom any more knowledge than what arises from their experience and natural sagacity. The most approved author in our language is Price in his *British Carpenter*. Mathurin Jousse is in like manner the author most in repute in France; and the publications of both these authors are void of every appearance of principle. It is not uncommon to see the works of carpenters of the greatest reputation tumble down, in consequence of mistakes from which the most elementary knowledge would have saved them.

¹⁴ We shall attempt, in this article, to give an account of the leading principles of this art in a manner so familiar and palpable, that any person who knows the common properties of the lever, and the composition of motion, shall so far understand them as to be able, on every occasion, so to dispose his materials, with respect to the strains to which they are to be exposed, that he shall always know the effective strain on every piece, and shall,

Roof.

¹³ Necessity of science in forming roofs;

¹⁴ And the little attention hitherto paid to it.

¹⁵ Purpose of this article.

Roof. shall, in most cases, be able to make the disposition such as to derive the greatest possible advantage from the materials which he employs.

16
Principles which regulate the strength of the materials.

It is evident that the whole must depend on the principles which regulate the strength of the materials, relative to the manner in which this strength is exerted, and the manner in which the strain is laid on the piece of matter. With respect to the first, this is not the proper place for considering it, and we must refer the reader to the article *STRENGTH of Materials in Mechanics*. We shall just borrow from that article two or three propositions suited to our purpose.

The force with which the materials of our edifices, roofs, floors, machines, and framings of every kind, resist being broken or crushed, or pulled asunder, is, immediately or ultimately, the cohesion of their particles. When a weight hangs by a rope, it tends either immediately to break all the fibres, overcoming the cohesion among the particles of each, or it tends to pull one parcel of them from among the rest, with which they are joined. This union of the fibres is brought about by some kind of gluten, or by twisting, which causes them to bind each other so hard that any one will break rather than come out, so much is it withheld by friction. The ultimate resistance is therefore the cohesion of the fibre; the force or strength of all fibrous materials, such as timber, is exerted in much the same manner. The fibres are either broken or pulled out from among the rest. Metals, stone, glass, and the like, resist being pulled asunder by the simple cohesion of their parts.

The force which is necessary for breaking a rope or wire is a proper measure of its strength. In like manner, the force necessary for tearing directly asunder any rod of wood or metal, breaking all its fibres, or tearing them from among each other, is a proper measure of the united strength of all these fibres. And it is the simplest strain to which they can be exposed, being just equal to the sum of the forces necessary for breaking or disengaging each fibre. And, if the body is not of a fibrous structure, which is the case with metals, stones, glass, and many other substances, this force is still equal to the simple sum of the cohesive forces of each particle which is separated by the fracture. Let us distinguish this mode of exertion of the cohesion of the body by the name of its *ABSOLUTE STRENGTH*.

When solid bodies are, on the contrary, exposed to great compression, they can resist only to a certain degree. A piece of clay or lead will be squeezed out; a piece of freestone will be crushed to powder; a beam of wood will be crippled, swelling out in the middle, and its fibres lose their mutual cohesion, after which it is easily crushed by the load. A notion may be formed of the manner in which these strains are resisted by conceiving a cylindrical pipe filled with small shot, well shaken together, so that each sphericle is lying in the closest manner possible, that is, in contact with six others in the same vertical plane (this being the position in which the shot will take the least room). Thus each touches the rest in six points only, by some cement. This assemblage will stick together and form a cylindrical pillar, which may be taken out of its mould. Sup-

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pose this pillar standing upright, and loaded above. The supports arising from the cement act obliquely, and the load tends either to force them asunder laterally, or to make them slide on each other: either of these things happening, the whole is crushed to pieces. The resistance of fibrous materials to such a strain is a little more intricate, but may be explained in a way very similar.

A piece of matter of any kind may also be destroyed by wrenching or twisting it. We can easily form a notion of its resistance to this kind of strain by considering what would happen to the cylinder of small shot if treated in this way.

And lastly, a beam, or a bar of metal, or a piece of stone or other matter, may be broken transversely. This will happen to a rafter or joist supported at the ends when overloaded, or to a beam having one end stuck fast in a wall and a load laid on its projecting part. This is the strain to which materials are most commonly exposed in roofs; and, unfortunately, it is the strain which they are the least able to bear; or rather it is the manner of application which causes an external force to excite the greatest possible immediate strain on the particles. It is against this that the carpenter must chiefly guard, avoiding it when in his power, and, in every case, diminishing it as much as possible. It is necessary to give the reader a clear notion of the great weakness of materials in relation to this transverse strain. But we shall do nothing more, referring him to the articles *STRAIN, STRESS, STRENGTH*.

Let ACBD (fig. 1.) represent the side of a beam projecting horizontally from a wall in which it is firmly fixed, and let it be loaded with a weight W appended to its extremity. This tends to break it; and the least reflection will convince any person that if the beam is equally strong throughout, it will break in the line CD, even with the surface of the wall. It will open at D, while C will serve as a sort of joint, round which it will turn. The cross section through the line CD is, for this reason, called the *section of fracture*, and the horizontal line, drawn through C on its under surface, is called the *axis of fracture*. The fracture is made by tearing asunder the fibres, such as DE or FG. Let us suppose a real joint at C, and that the beam is really sawed through along CD, and that in place of its natural fibres threads are substituted all over the section of fracture. The weight now tends to break these threads; and it is our business to find the force necessary for this purpose.

It is evident that DCA may be considered as a bent lever, of which C is the fulcrum. If f be the force which will just balance the cohesion of a thread when hung on it so that the smallest addition will break it, we may find the weight which will be sufficient for this purpose when hung on at A, by saying, $AC : CD = f : \varphi$, and φ will be the weight which will just break the thread, by hanging φ by the point A. This gives

us $\varphi = f \times \frac{CD}{CA}$. If the weight be hung on at a , the force just sufficient for breaking the same thread will be $= f \frac{CD}{Ca}$.

In like manner the force φ , which must be hung on at A in order to break an equally strong or an

17
Their weakness in relation to transverse strains.

Plate CCCCXL.

Roof.

equally resisting fibre at F, must be $=f \times \frac{CF}{CA}$. And so on of all the rest.

If we suppose all the fibres to exert equal resistances at the instant of fracture, we know, from the simplest elements of mechanics, that the resistance of all the particles in the line CD, each acting equally in its own place, is the same as if all the individual resistances were united in the middle point *g*. Now this total resistance is the resistance or strength *f* of each particle, multiplied by the number of particles. This number may be expressed by the line CD, because we have no reason to suppose that they are at unequal distances. Therefore, in comparing different sections together, the number of particles in each are as the sections themselves. Therefore DC may represent the number of particles in the line DC'. Let us call this line the depth of the beam, and express it by the symbol *d*. And since we are at present treating of roofs whose rafters and other parts are commonly of uniform breadth, let us call AH or BI the breadth of the beam, and express it by *b*, and let CA be called its length, *l*. We may now express the strength of the whole line CD by $f \times d$, and we may suppose it all concentrated in the middle point *g*. Its mechanical energy, therefore, by which it resists the energy of the weight *w*, applied at the distance *l*, is $f \cdot CD \cdot Cg$, while the momentum of *w* is $w \cdot CA$. We must therefore have $f \cdot CD \cdot Cg = w \cdot CA$, or $fd \cdot \frac{1}{2}d = w \cdot l$, and $fd : w = l : \frac{1}{2}d$, or $fd : w = 2l : d$. That is, twice the length of the beam is to its depth as the absolute strength of one of its vertical planes to its relative strength, or its power of resisting this transverse fracture.

It is evident, that what has been now demonstrated of the resistance exerted in the line CD, is equally true of every line parallel to CD in the thickness or breadth of the beam. The absolute strength of the whole section of fracture is properly represented by $f \cdot d \cdot b$, and we still have $2l : d = fdb : w$; or twice the length of the beam is to its depth as the absolute strength to the relative strength. Suppose the beam 12 feet long and one foot deep; then whatever is its absolute strength, the 24th part of this will break it if hung at its extremity.

But even this is too favourable a statement; all the fibres are supposed to meet alike in the instant of fracture. But this is not true. At the instant that the fibre at D breaks, it is stretched to the utmost, and is exerting its whole force. But at this instant the fibre at *g* is not so much stretched, and it is not then exerting its utmost force. If we suppose the extension of the fibres to be as their distance from C, and the actual exertion of each to be as their extensions, it may easily be shown (see STRENGTH and STRAIN), that the whole resistance is the same as if the full force of all the fibres were united at a point *r* distant from C by one third of CD. In this case we must say, that the absolute strength is to the relative strength as three times the length to the depth; so that the beam is weaker than by the former statement in the proportion of two to three.

Even this is more strength than experiment justifies; and we can see an evident reason for it. When the beam is strained, not only are the upper fibres stretched, but the lower fibres are compressed. This is

very distinctly seen, if we attempt to break a piece of cork cut into the shape of a beam: this being the case, C is not the centre of fracture. There is some point *c* which lies between the fibres which are stretched and those that are compressed. This fibre is neither stretched nor squeezed; and this point is the real centre of fracture: and the lever by which a fibre D resists, is not DC, but a shorter one D*c*; and the energy of the whole resistances must be less than by the second statement. Till we know the proportion between the dilatibility and compressibility of the parts, and the relation between the dilatations of the fibres and the resistances which they exert in this state of dilatation, we cannot positively say where the point *c* is situated, nor what is the sum of the actual resistances, or the point where their action may be supposed concentrated. The firmer woods, such as oak and chestnut, may be supposed to be but slightly compressible; we know that willow and other soft woods are very compressible. These last must therefore be weaker: for it is evident, that the fibres which are in a state of compression do not resist the fracture. It is well known, that a beam of willow may be cut through from C to *g* without weakening it in the least, if the cut be filled up by a wedge of hard wood stuck in.

We can only say, that very sound oak and red fir have the centre of effort so situated, that the absolute strength is to the relative strength in a proportion not less than that of three and a half times the length of the beam to its depth. A square inch of sound oak will carry about 8000 pounds. If this bar be firmly fixed in a wall, and project 12 inches, and be loaded at the extremity with 200 pounds, it will be broken. It will just bear 190, its relative strength being $\frac{1}{24}$ of its absolute strength; and this is the case only with the finest pieces, so placed that their annual plates or layers are in a vertical position. A larger log is not so strong transversely, because its plates lie in various directions round the heart.

These observations are enough to give us a distinct notion of the vast diminution of the strength of timber when the strain is across it; and we see the justice of the maxim which we inculcated, that the carpenter, in framing roofs, should avoid as much as possible the exposing his timbers to transverse strains. But this cannot be avoided in all cases. Nay, the ultimate strain, arising from the very nature of a roof, is transverse. The rafters must carry their own weight, and this tends to break them across: an oak beam a foot deep will not carry its own weight if it project more than 60 feet. Besides this, the rafters must carry the lead, tiling, or slates. We must therefore consider this transverse strain a little more particularly, so as to know what strain will be laid on any part by an unavoidable load, laid on either at that part or at any other.

We have hitherto supposed, that the beam had one of its ends fixed in a wall, and that it was loaded at the other end. This is not an usual arrangement, and was taken merely as affording a simple application of the mechanical principles. It is much more usual to have the beam supported at the ends, and loaded in the middle. Let the beam FE*GH* (fig. 2.) rest on the props E and G, and be loaded at its middle point C with a weight W. It is required to determine the strain at the section CD? It is plain that the beam will

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Practical
inference.19
Effect when
beams are
supported
at the ends
and loaded
in the mid-
dle, &c.

Roof. receive the same support, and suffer the same strain, if instead of the blocks E and G, we substitute the ropes E *f* e, G *h* g, going over the pulleys *f* and *g*, and loaded with proper weights *e* and *g*. The weight *e* is equal to the support given by the block E; and *g* is equal to the support given by G. The sum of *e* and *g* is equal to W; and, on whatever point W is hung, the weights *e* and *g* are to W in the proportion of DG and DE to GE. Now, in this state of things, it appears that the strain on the section CD arises immediately from the upward action of the ropes F *f* and H *h*, or the upward pressures of the blocks E and G; and that the office of the weight W is to oblige the beam to oppose this strain. Things are in the same state in respect of strain as if a block were substituted at D for the weight W, and the weights *e* and *g* were hung on at E and G; only the directions will be opposite. The beam tends to break in the section CD, because the ropes pull it upwards at E and G, while a weight W holds it down at C. It tends to open at D, and C becomes the centre of fracture. The strain therefore is the same as if the half ED were fixed in the wall, and a weight equal to *g*, that is, to the half of W, were hung on at G.

Hence we conclude, that a beam supported at both ends, but not fixed there, and loaded in the middle, will carry twice as much weight as it can carry at its extremity, when the other extremity is fast in a wall.

The strain occasioned at any point L by a weight W, hung on at any other point D, is $= W \times \frac{DE}{EG} \times LG$. For EG is to ED as W to the pressure occasioned at G. This would be balanced by some weight *g* acting over the pulley *h*; and this tends to break the beam at L, by acting on the lever GL. The pressure at G is $W \cdot \frac{DE}{EG}$, and therefore the strain at L is $W \cdot \frac{DE}{EG} \cdot LG$.

In like manner, the strain occasioned at the point D by the weight W hung on there, is $W \cdot \frac{DE}{EG} \times DG$; which is therefore equal to $\frac{1}{2} W$, when D is the middle point.

Hence we see, that the general strain on the beam arising from one weight, is proportionable to the rectangle of the parts of the beam, (for $\frac{W \cdot DE \cdot DG}{EG}$ is as $DE \cdot DG$), and is greatest when the load is laid on the middle of the beam.

We also see, that the strain at L, by a load at D, is equal to the strain at D by the same load at L. And the strain at L, from a load at D, is to the strain by the same load at L as DE to LE. These are all very obvious corollaries; and they sufficiently inform us concerning the strains which are produced on any part of the timber by a load laid on any other part.

If we now suppose the beam to be fixed at the two ends, that is, firmly framed, or held down by blocks at I and K, placed beyond E and G, or framed into posts, it will carry twice as much as when its ends were free. For suppose it sawn through at CD; the weight W hung on there will be just sufficient to break it at E and G. Now restore the connection of the sec-

tion CD, it will require another weight W to break it there at the same time.

Therefore, when a rafter, or any piece of timber, is firmly connected with three fixed points G, E, I, it will bear a greater load between any two of them than if its connection with the remote point were removed; and if it be fastened in four points, G, E, I, K, it will be twice as strong in the middle part as without the two remote connections.

One is apt to expect from this that the joist of a floor will be much strengthened by being firmly built in the wall. It is a little strengthened; but the hold which can thus be given it is much too short to be of any sensible service; and it tends greatly to shatter the wall, because, when it is bent down by a load, it forces up the wall with the momentum of a long lever. Judicious builders therefore take care not to bind the joists tight in the wall. But when the joists of adjoining rooms lie in the same direction, it is a great advantage to make them of one piece. They are then twice as strong as when made in two lengths.

It is easy to deduce from these premises the strain on any point which arises from the weight of the beam itself, or from any load which is uniformly diffused over the whole or any part. We may always consider the whole of the weight which is thus uniformly diffused over any part as united in the middle point of that part; and if the load is not uniformly diffused, we may still suppose it united at its centre of gravity. Thus, to know the strain at L arising from the weight of the whole beam, we may suppose the whole weight accumulated in its middle point D. Also the strain at L, arising from the weight of the part ED, is the same as if this weight were accumulated in the middle point *d* of ED; and it is the same as if half the weight of ED were hung on at D. For the real strain at L is the upward pressure at G, acting by the lever GL. Now call the weight of the part DE *e*; this upward pressure will be $\frac{e \times dE}{EG}$, or $\frac{\frac{1}{2} e \times DE}{EG}$.

Therefore the strain on the middle of a beam, arising from its own weight, or from any uniform load, is the weight of the beam or its load $\times \frac{ED}{EG} \times DG$; that is, half the weight of the beam or load multiplied or acting by the lever DG; for $\frac{ED}{EG}$ is $\frac{1}{2}$.

Also the strain at L, arising from the weight of the beam, or the uniform load, is $\frac{1}{2}$ the weight of the beam or load acting by the lever LG. It is therefore proportional to LG, and is greatest of all at D. Therefore a beam of uniform strength throughout, uniformly loaded, will break in the middle.

It is of importance to know the relation between the strains arising from the weights of the beams, or from any uniformly diffused load, and the relative strength. We have already seen, that the relative strength is $\int \frac{d^2 b \cdot d}{m l}$, where *m* is a number to be discovered by experiment for every different species of materials. Leaving out every circumstance but what depends on the dimensions of the beam, viz. *d*, *b*, and *l*, we see that the relative strength is in the proportion of $\frac{d^2 b}{l}$, that

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that is, as the breadth and the square of the depth directly and the length inversely.

Now, to consider first the strain arising from the weight of the beam itself, it is evident that this weight increases in the same proportion with the depth, the breadth, and the length of the beam. Therefore its power of resisting this strain must be as its depth directly, and the square of its length inversely. To consider this in a more popular manner, it is plain that the increase of breadth makes no change in the power of resisting the actual strain, because the load and the absolute strength increase in the same proportion with the breadth. But by increasing the depth, we increase the resisting section in the same proportion, and therefore the number of resisting fibres and the absolute strength: but we also increase the weight in the same proportion. This makes a compensation, and the relative strength is yet the same. But by increasing the depth, we have not only increased the absolute strength, but also its mechanical energy: For the resistance to fracture is the same as if the full strength of each fibre was exerted at the point which we called the centre of effort; and we showed, that the distance of this from the under side of the beam was a certain portion (a half, a third, a fourth, &c.) of the whole depth of the beam. This distance is the arm of the lever by which the cohesion of the wood may be supposed to act. Therefore this arm of the lever, and consequently the energy of the resistance, increases in the proportion of the depth of the beam, and this remains uncompensated by any increase of the strain. On the whole, therefore, the power of the beam to sustain its own weight increases in the proportion of its depth. But, on the other hand, the power of withstanding a given strain applied at its extremity, or to any aliquot part of its length, is diminished as the length increases, or is inversely as the length; and the strain arising from the weight of the beam also increases as the length. Therefore the power of resisting the strain actually exerted on it by the weight of the beam is inversely as the square of the length. On the whole, therefore, the power of a beam to carry its own weight, varies in the proportion of its depth directly and the square of its length inversely.

As this strain is frequently a considerable part of the whole, it is proper to consider it apart, and then to reckon only on what remains for the support of any extraneous load.

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Power of a
beam to
carry a load
uniformly
diffused
over its
length.

In the next place, the power of a beam to carry any load which is uniformly diffused over its length, must be inversely as the square of the length: for the power of withstanding any strain applied to an aliquot part of the length (which is the case here, because the load may be conceived as accumulated at its centre of gravity, the middle point of the beam) is inversely as the length; and the actual strain is as the length, and therefore its momentum is as the square of the length. Therefore the power of a beam to carry a weight uniformly diffused over it, is inversely as the square of the length. *N. B.* It is here understood, that the uniform load is of some determined quantity for every foot of the length, so that a beam of double length carries a double load.

23
Effect when
the action
of the load
oblique.

We have hitherto supposed that the forces which tend to break a beam transversely, are acting in a direc-

tion perpendicular to the beam. This is always the case in level floors loaded in any manner; but in roofs, the action of the load tending to break the rafters is oblique, because gravity always acts in vertical lines. It may also frequently happen, that a beam is strained by a force acting obliquely. This modification of the strain is easily discussed. Suppose that the external force, which is measured by the weight W in fig. 1. acts in the direction Aw instead of AW . Draw $C\acute{a}$ perpendicular to Aw . Then the momentum of this external force is not to be measured by $W \times AC$, but by $W \times \acute{a}C$. The strain therefore by which the fibres in the section of fracture DC are torn asunder, is diminished in the proportion of CA to $C\acute{a}$, that is, in the proportion of radius to the sine of the angle $CA\acute{a}$, which the beam makes with the direction of the external force.

To apply this to our purpose in the most familiar manner, let AB (fig. 3.) be an oblique rafter of a building, loaded with a weight W suspended to any point C , and thereby occasioning a strain in some part D . We have already seen, that the immediate cause of the strain on D is the reaction of the support which is given to the point B . The rafter may at present be considered as a lever, supported at A , and pulled down by the line CW . This occasions a pressure on B , and the support acts in the opposite direction to the action of the lever, that is, in the direction Bb , perpendicular to BA . This tends to break the beam in every part.

The pressure exerted at B is $\frac{W \times AE}{AB}$, AE being a horizontal line. Therefore the strain at D will be $\frac{W \times AE}{AB} \times BD$. Had the beam been lying horizontally, the strain at D , from the weight W suspended at C , would have been $\frac{W \times AC}{AB} \times BD$. It is therefore diminished in the proportion of AC to AE , that is, in the proportion of radius to the cosine of the elevation, or in the proportion of the secant of elevation to the radius.

It is evident, that this law of diminution of the strain is the same whether the strain arises from a load on any part of the rafter, or from the weight of the rafter itself, or from any load uniformly diffused over its length, provided only that these loads act in vertical lines.

We can now compare the strength of roofs which have different elevations. Supposing the width of the building to be given, and that the weight of a square yard of covering is also given. Then, because the load on the rafter will increase in the same proportion with its length, the load on the slant-side BA of the roof will be to the load of a similar covering on the half AF of the flat roof, of the same width, as AB to AF . But the transverse action of any load on AB , by which it tends to break it, is to that of the same load on AF as AF to AB . The transverse strain therefore is the same on both, the increase of real load on AB being compensated by the obliquity of its action. But the strengths of beams to resist equal strains, applied to similar points, or uniformly diffused over them, are inversely as their lengths, because the momentum or energy of the strain is proportional to the length. Therefore

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Strength of
roofs ha-
ving diffe-
rent eleva-
tions com-
pared.

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fore the power of AB to withstand the strain to which it is really exposed, is to the power of AF to resist its strain as AF to AB. If, therefore, a rafter AG of a certain scantling is just able to carry the roofing laid on it, a rafter AB of the same scantling, but more elevated, will be too weak in the proportion of AG to AB. Therefore steeper roofs require stouter rafters, in order that they may be equally able to carry a roofing of equal weight per square yard. To be equally strong, they must be made broader, or placed nearer to each other, in the proportion of their greater length, or they must be made deeper in the subduplicate proportion of their length. The following easy construction will enable the artist not familiar with computation to proportion the depth of the rafter to the slope of the roof.

Let the horizontal line *af* (fig. 4.) be the proper depth of a beam whose length is half the width of the building; that is, such as would make it fit for carrying the intended tiling laid on a flat roof. Draw the vertical line *fb*, and the line *ab* having the elevation of the rafter; make *ag* equal to *af*, and describe the semicircle *bdg*; draw *ad* perpendicular to *ab*, *ad* is the required depth. The demonstration is evident.

We have now treated in sufficient detail what relates to the chief strain on the component parts of a roof, namely, what tends to break them transversely; and we have enlarged more on the subject than what the present occasion indispensably required, because the propositions which we have demonstrated are equally applicable to all framings of carpentry, and are even of greater moment in many cases, particularly in the construction of machines. These consist of levers in various forms, which are strained transversely; and similar strains frequently occur in many of the supporting and connecting parts. We shall give in the article *TIMBER* an account of the experiments which have been made by different naturalists, in order to ascertain the absolute strength of some of the materials which are most generally framed together in buildings and engines. The house-carpenter will draw from them absolute numbers, which he can apply to his particular purposes by means of the propositions which we have now established.

23
Effect of
other
strains,
pressures,
or thrusts.

We proceed, in the next place, to consider the other strains to which the parts of roofs are exposed, in consequence of the support which they mutually give each other, and the pressures (or *thrusts* as they are called in the language of the house-carpenter) which they exert on each other, and on the walls or piers of the building.

Let a beam or piece of timber AB (fig. 5.) be suspended by two lines AC, BD; or let it be supported by two props AE, BF, which are perfectly moveable round their remote extremities E, F, or let it rest on the two polished plains KAH, LBM. Moreover, let G be the centre of gravity of the beam, and let GN be a line through the centre of gravity perpendicular to the horizon. The beam will not be in equilibrio unless the vertical line GN either passes through P, the point in which the directions of the two lines AC, BD, or the directions of the two props EA, FD, or the perpendiculars to the two planes KAH, LBM intersect each other, or is parallel to these directions. For the supports given by the lines or props are unquestionably exerted in the direction of their lengths; and it is as well

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known in mechanics that the supports given by planes are exerted in a direction perpendicular to those planes in the points of contact; and we know that the weight of the beam acts in the same manner as if it were all accumulated in its centre of gravity G, and that it acts in the direction GN perpendicular to the horizon. Moreover, when a body is in equilibrio between three forces, they are acting in one plane, and their directions are either parallel or they pass through one point.

The support given to the beam is therefore the same as if it were suspended by two lines which are attached to the single point P. We may also infer, that the points of suspension C, D, the points of support E, F, the points of contact A, B, and the centre of gravity G, are all in one vertical plane.

When this position of the beam is disturbed by any external force, there must either be a motion of the points A and B round the centres of suspension C and D, or of the props round these points of support E and F, or a sliding of the ends of the beam along the polished planes GH and IK; and in consequence of these motions the centre of gravity G will go out of its place, and the vertical line GN will no longer pass through the point where the directions of the supports intersect each other. If the centre of gravity rises by this motion, the body will have a tendency to recover its former position, and it will require force to keep it away from it. In this case the equilibrium may be said to be *stable*, or the body to have *stability*. But if the centre of gravity descends when the body is moved from the position of equilibrium, it will tend to move still farther; and so far will it be from recovering its former position, that it will now fall. This equilibrium may be called a *tottering equilibrium*. These accidents depend on the situations of the points A, B, C, D, E, F; and they may be determined by considering the subject geometrically. It does not much interest us at present; it is rarely that the equilibrium of suspension is tottering, or that of props is stable. It is evident, that if the beam were suspended by lines from the point P, it would have stability, for it would swing like a pendulum round P, and therefore would always tend towards the position of equilibrium. The intersection of the lines of support would still be at P, and the vertical line drawn through the centre of gravity, when in any other situation, would be on that side of P towards which this centre has been moved. Therefore, by the rules of pendulous bodies, it tends to come back. This would be more remarkably the case if the points of suspension C and D be on the same side of the point P with the points of attachment A and B; for in this case the new point of intersection of the lines of support would shift to the opposite side, and be still farther from the vertical line through the new position of the centre of gravity. But if the points of suspension and of attachment are on opposite sides of P, the new point of intersection may shift to the same side with the centre of gravity, and lie beyond the vertical line; in this case the equilibrium is tottering. It is easy to perceive, too, that if the equilibrium of suspension from the points C and D be stable, the equilibrium on the props AE and BF must be tottering. It is not necessary for our present purpose to engage more particularly in this discussion.

It is plain that, with respect to the mere momentary equilibrium, there is no difference in the support by threads,

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threads, or props, or planes, and we may substitute the one for the other. We shall find this substitution extremely useful, because we easily conceive distinct notions of the support of a body by strings.

Observe farther, that if the whole figure be inverted, and strings be substituted for props, and props for strings, the equilibrium will still obtain: for by comparing fig. 5. with fig. 6. we see that the vertical line through the centre of gravity will pass through the intersection of the two strings or props; and this is all that is necessary for the equilibrium: only it must be observed in the substitution of props for threads, and of threads for props, that if it be done without inverting the whole figure, a stable equilibrium becomes a tottering one, and *vice versa*.

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Examples.

This is a most useful proposition, especially to the unlettered artisan, and enables him to make a practical use of problems which the greatest mechanical geniuses have found no easy task to solve. An instance will show the extent and utility of it. Suppose it were required to make a mansard or kirb roof whose width is AB (fig. 7.), and consisting of the four equal rafters AC, CD, DE, EB. There can be no doubt but that its best form is that which will put all the parts in equilibrium, so that no ties or stays may be necessary for opposing the unbalanced thrust of any part of it. Make a chain *a c d e b* (fig. 8.) of four equal pieces, loosely connected by pin-joints, round which the parts are perfectly moveable. Suspend this from two pins *a, b*, fixed in a horizontal line. This chain or festoon will arrange itself in such a form that its parts are in equilibrium. Then we know that if the figure be inverted, it will compose the frame or truss of a kirb-roof *a y d b*, which is also in equilibrium, the thrusts of the pieces balancing each other in the same manner that the mutual pulls of the hanging festoon *a c d e b* did. If the proportion of the height *df* to the width *ab* is not such as pleases, let the pins *a, b* be placed nearer or more distant, till a proportion between the width and height is obtained which pleases, and then make the figure ACDEB fig. 7. similar to it. It is evident that this proposition will apply in the same manner to the determination of the form of an arch of a bridge; but this is not a proper place for a farther discussion.

We are now able to compute all the thrusts and other pressures which are exerted by the parts of a roof on each other and on the walls. Let AB (fig. 9.) be a beam standing anyhow obliquely, and G its centre of gravity. Let us suppose that the ends of it are supported in any directions AC, BD, by strings, props, or planes. Let these directions meet in the point P of the vertical line PG passing through its centre of gravity. Through G draw lines *G a, G b* parallel to PB, PA. Then

The weight of the beam }
The pressure or thrust at A } are proportional to { PG
The pressure at B } { Pa
{ Pb.

For when a body is in equilibrium between three forces, these forces are proportional to the sides of a triangle which have their directions.

In like manner, if *A g* be drawn parallel to *P b*, we shall have

Weight of the beam }
Thrust on A } proportional to { Pg
Thrust on B } { Pa
{ Bg

Or, drawing B y parallel to P a

Weight of beam }
Thrust at A } are proportional to { P y
Thrust at B } { B y
{ PB

It cannot be disputed that, if strength alone be considered, the proper form of a roof is that which puts the whole in equilibrio, so that it would remain in that shape although all the joints were perfectly loose or flexible. If it has any other shape, additional ties or braces are necessary for preserving it, and the parts are unnecessarily strained. When this equilibrium is obtained, the rafters which compose the roof are all acting on each other in the direction of their lengths; and by this action, combined with their weights, they sustain no strain but that of compression, the strain of all others that they are the most able to resist. We may consider them as so many inflexible lines having their weights accumulated in their centres of gravity. But it will allow an easier investigation of the subject, if we suppose the weights to be at the joints, equal to the real vertical pressures which are exerted on these points. These are very easily computed: for it is plain, that the weight of the beam AB (fig. 9.) is to the part of this weight that is supported at B as AB to AG. Therefore, if W represent the weight of the beam, the vertical pressure at B will be $W \times \frac{AG}{AB}$, and the vertical pressure at A will be $W \times \frac{BG}{AB}$. In like manner, the prop BF being considered as another beam, and *f* as its centre of gravity and *w* as its weight, a part of this weight, equal to $w \times \frac{fF}{BF}$, is supported at B, and the whole vertical pressure at B is $W \times \frac{AG}{AB} + w \times \frac{fF}{BF}$. And thus we greatly simplify the construction of the mutual thrusts of roof frames. We need hardly observe, that although these pressures by which the parts of a frame support each other in opposition to the vertical action of gravity, are always exerted in the direction of the pieces, they may be resolved into pressures acting in any other direction which may engage our attention.

All that we propose to deliver on this subject at present may be included in the following proposition.

Let ABCDE (fig. 10.) be an assemblage of rafters in a vertical plane, resting on two fixed points A and E in a horizontal line, and perfectly moveable round all the joints A, B, C, D, E; and let it be supposed to be in equilibrio, and let us investigate what adjustment of the different circumstances of weight and inclination of its different parts is necessary for producing this equilibrium.

Let F, G, H, I, be the centres of gravity of the different rafters, and let these letters express the weights of each. Then (by what has been said above) the weight which presses B directly downwards is $F \times \frac{AF}{AB} + G \times \frac{CG}{BC}$. The weight on C is in like manner $G \times \frac{BG}{BC} + H \times \frac{DH}{CD}$, and that on D is $H \times \frac{CH}{CD} + I \times \frac{EI}{DE}$.

Let *A b c d E* be the figure ABCDE inverted, in the manner already described. It may be conceived as a thread fastened at A and E, and loaded at *b, c*, and

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27

The proper form of a roof is that which puts the whole in equilibrio.

Roof. d with the weights which are really pressing on B, C, and D. It will arrange itself into such a form that all will be in equilibrio. We may discover this form by means of this single consideration, that any part bc of the thread is equally stretched throughout in the direction of its length. Let us therefore investigate the proportion between the weight b , which we suppose to be pulling the point b in the vertical direction bb to the weight d , which is pulling down the point d in a similar manner. It is evident, that since AE is a horizontal line, and the figures $AbcdE$ and $ABCDE$ equal and similar, the lines Bb , Cc , Dd , are vertical. Take bf to represent the weight hanging at b . By stretching the threads bA and bc , it is set in opposition to the contractile powers of the threads, acting in the directions bA and bc , and it is in immediate equilibrio with the equivalent of these two contractile forces. Therefore make bg equal to bf , and make it the diagonal of a parallelogram $bbig$. It is evident that bb , bi , are the forces exerted by the threads bA , bc . Then, seeing that the thread bc is equally stretched in both directions, make ck equal to bi ; ck is the contractile force which is excited at c by the weight which is hanging there. Draw kl parallel to cd , and lm parallel to bc . The force lc is the equivalent of the contractile forces ck , cm , and is therefore equal and opposite to the force of gravity acting at C . In like manner, make $dn = cm$, and complete the parallelogram $ndpo$, having the vertical line od for its diagonal. Then dn and dp are the contractile forces excited at d , and the weight hanging there must be equal to od .

Therefore, the load at b is to the load at d as bg to do . But we have seen that the compressing forces at B, C, D may be substituted for the extending forces at b, c, d . Therefore the weights at B, C, D which produce the compressions, are equal to the weights at b, c, d , which produce the extensions. Therefore $bg : do =$

$$F \times \frac{AF}{AB} + G \times \frac{CG}{BC} : H \times \frac{CH}{CD} + I \times \frac{EI}{DE}.$$

Let us enquire what relation there is between this proportion of the loads upon the joints at B and D, and the angles which the rafters make at these joints with each other, and with the horizon or the plumb lines. Produce AB till it cut the vertical Cc in Q ; draw BR parallel to CD , and BS parallel to DE . The similarity of the figures $ABCDE$ and $AbcdE$, and the similarity of their position with respect to the horizontal and plumb lines, show, without any further demonstration, that the triangles QCB and gbi are similar, and that $QB : BC = gi : ib = bb : ib$. Therefore QB is to BC as the contractile force exerted by the thread Ab to that exerted by bc ; and therefore QB is to BC as the compression of BA to the compression on BC (A). Then, because bi is equal to ck , and the triangles CBR and ckl are similar, $CB : BR = ck : kl = ck : cm$, and CB is to BR as the compression on CB to the compression on CD . And, in like manner, be-

cause $cm = dn$, we have BR to BS as the compression on DC to the compression on DE . Also $BR : RS = nd : do$, that is, as the compression on DC to the load on D . Finally, combining all these ratios

$$QC : CB = gb : bi = gb : kc$$

$$CB : BR = kc : kl = kc : dn$$

$$BR : BS = nd : no = dn : no$$

$$BS : RS = no : do = no : do, \text{ we have finally}$$

$$QC : RS = gb : od = \text{Load at B} : \text{Load at D}.$$

Now

$$QC : BC = f, QBC : f, BQC, = f, ABC : f, ABb$$

$$BC : BR = f, BRC : f, BCR, = f, CDd : f, bBC$$

$$BR : RS = f, BSR : f, RBS = f, dDE : f, CDE$$

Therefore

$$QC : RS = f, ABC, f, CDd, f, dDE : f, CDE, f, ABb, f, bBC.$$

Or

$$QC : RS = \frac{f, ABC}{f, ABb, f, CBb} : \frac{f, CDE}{f, dDE, f, dDE}.$$

That is, the loads on the different joints are as the sines of the angles at these joints directly, and as the products of the sines of the angles which the rafters make with the plumb-lines inversely.

Or, the loads are as the sines of the angles of the joints directly, and as the products of the cosines of the elevations of the rafters jointly.

Or, the loads at the joints are as the sines of the angles at the joints, and as the products of the secants of elevation of the rafters jointly: for the secants of angles are inversely as the cosines.

Draw the horizontal line BT . It is evident, that if this be considered as the radius of a circle, the lines BQ , BC , BR , BS are the secants of the angles which these lines make with the horizon. And they are also as the thrusts of those rafters to which they are parallel. Therefore, the thrust which any rafter makes in its own direction is as the secant of its elevation.

The horizontal thrust is the same at all the angles. For $i = k = m = n = p$. Therefore both walls are equally pressed out by the weight of the roof. We can find its quantity by comparing it with the load on one of the joints:

$$\text{Thus, } QC : CB = f, ABC : f, ABb$$

$$BC : BT = \text{Rad.} : f, BCT, = \text{Rad.} : f, CBb$$

$$\text{Therefore, } QC : BT = \text{Rad.} \times f, ABC : f, bBA \times f, bBC$$

It deserves remark, that the lengths of the beams do not affect either the proportion of the load at the different joints, nor the position of the rafters. This depends merely on the weights at the angles. If a change of length affects the weight, this indeed affects the form also; and this is generally the case. For it seldom happens, indeed it never should happen, that the weight on rafters of longer bearing are not greater. The covering alone increases nearly in the proportion of the length of the rafter.

If the proportion of the weights at B, C, and D are

(A) This proportion might have been shown directly without any use of the inverted figure or consideration of contractile forces; but this substitution gives distinct notions of the mode of acting even to persons not much conversant in such disquisitions; and we wish to make it familiar to the mind, because it gives an easy solution of the most complicated problems, and furnishes the practical carpenter, who has little science, with solutions of the most difficult cases by experiment. A feltoon, as we called it, may easily be made; and we are certain, that the forms into which it will arrange itself are models of perfect frames.

Roof.

are given, as also the position of any two of the lines, the position of all the rest is determined.

If the horizontal distances between the angles are all equal, the forces on the different angles are proportional to the verticals drawn on the lines through these angles from the adjoining angle, and the thrusts from the adjoining angles are as the lines which connect them.

If the rafters themselves are of equal lengths, the weights at the different angles are as these verticals and as the secants of the elevation of the rafters jointly.

29
Practical
inferences.

This proposition is very fruitful in its practical consequences. It is easy to perceive that it contains the whole theory of the construction of arches; for each stone of an arch may be considered as one of the rafters of this piece of carpentry, since all is kept up by its mere equilibrium. We may have an opportunity in some future article of exhibiting some very elegant and simple solutions of the most difficult cases of this important problem; and we now proceed to make use of the knowledge we have acquired for the construction of roofs.

30
To deter-
mine the
best form
of a kirb-
roof.

We mentioned by the bye, a problem which is not unfrequent in practice, to determine the best form of a kirb-roof. Mr Couplet of the Royal Academy of Paris has given a solution of it in an elaborate memoir in 1726, occupying several lemmas and theorems.

Let AE (fig. 11.) be the width, and CF the height; it is required to construct a roof ABCDE whose rafters AB, BC, CD, DE, are all equal, and which shall be in equilibrio.

Draw CE, and bisect it perpendicularly in H by the line DHG, cutting the horizontal line AE in G. About the centre G, with the distance GE, describe the circle EDC. It must pass through C, because CH is equal to HE and the angles at H are equal. Draw HK parallel to FE, cutting the circumference in K. Draw CK, cutting GH in D. Join CD, ED; these lines are the rafters of half of the roof required.

We prove this by showing, that the loads in the angles C and D are equal. For this is the proportion which results from the equality of the rafters, and the extent of surface of the uniform roofing which they are supposed to support. Therefore produce ED till it meet the vertical FC in N; and having made the side CBA similar to CDE, complete the parallelogram BCDP, and draw DB, which will bisect CP in R, as the horizontal line KH, bisects CF in Q. Draw KF, which is evidently parallel to DP. Make CS perpendicular to CF, and equal to FG; and about S, with the radius SF, describe the circle FKW. It must pass through K, because SF is equal to CG, and CQ = QF. Draw WK, WS, and produce BC, cutting ND in O.

The angle WKF at the circumference is one-half of the angle WSF at the centre, and is therefore equal to WSC, or CGF. It is therefore double of the angle CEF or ECS. But ECS is equal to ECD and DCS, and ECD is one-half of NDC, and DCS is one-half of DCO, or CDP. Therefore the angle WKF is equal to NDP, and WK is parallel to ND, and CF is to CW as CP to CN; and CN is equal to CP. But it has been shown above, that CN and CP are as the

loads upon D and C. These are therefore equal, and the frame ABCDE is in equilibrio.

A comparison of this solution with that of Mr Couplet will show its great advantage in respect of simplicity and perspicuity. And the intelligent reader can easily adapt the construction to any proportion between the rafters AB and BC, which other circumstances, such as garret-room, &c. may render convenient. The construction must be such that NC may be to CP as CD to $\frac{CD+DE}{2}$.

Whatever proportion of AB to BC is assumed, the point D' will be found in the circumference of a semicircle H'D'b', whose centre is in the line CE, and having $AB:BC=CH':HE', = c'b':b'E'$. The rest of the construction is simple.

In buildings which are roofed with slate, tile, or shingles, the circumstance which is most likely to limit the construction is the slope of the upper rafters CB, CD. This must be sufficient to prevent the penetration of rain, and the stripping by the winds. The only circumstance left in our choice in this case is the proportion of the rafters AB and BC. Nothing is easier than making NC to CP in any desired proportion when the angle BCD is given.

We need not repeat that it is always a desirable thing to form a truss for a roof in such a manner that it shall be in equilibrio. When this is done, the whole force of the struts and braces which are added to it is employed in preserving this form, and no part is expended in unnecessary strains. For we must now observe, that the equilibrium of which we have been treating is always of that kind which we called the tottering, and the roof requires stays, braces, or hanging timbers, to give it stiffness, or keep it in shape. We have also said enough to enable any reader, acquainted with the most elementary geometry and mechanics, to compute the transverse strains and the thrusts to which the component parts of all roofs are exposed.

It only remains now to show the general maxims by which all roofs must be constructed, and the circumstances which determine their excellence. In doing this we shall be exceedingly brief, and almost content ourselves with exhibiting the principal forms, of which the endless variety of roofs are only slight modifications.—We shall not trouble the reader with any account of such roofs as receive part of their support from the interior walls, but confine ourselves to the more difficult problem of throwing a roof over a wide building, without any intermediate support; because when such roofs are constructed in the best manner, that is, deriving the greatest possible strength from the materials employed, the best construction of the others is necessarily included. For all such roofs as rest on the middle walls are roofs of smaller bearing. The only exception deserving notice is the roofs of churches, which have aisles separated from the nave by columns. The roof must rise on these. But if it is of an arched form internally, the horizontal thrusts must be nicely balanced, that they may not push the columns aside.

The simplest notion of a roof-frame is, that it consists of two rafters AB and BC (fig. 12.), meeting in the ridge B.

Even this simple form is susceptible of better and worse

Roof.

31

The truss
for a roof
should al-
ways be
in equili-
brio.

32

General
maxims by
which all
roofs must
be construc-
ted.

33

Simplest
notion of a
roof.

³⁴
Best form
of rafters.

Roof. worse. We have already seen, that when the weight of a square yard of covering is given, a steeper roof requires stronger rafters, and that when the scantling of the timbers is also given, the relative strength of a rafter is inversely as its length. But there is now another circumstance to be taken into the account, viz. the support which one rafter leg gives to the other. The best form of a rafter will therefore be that in which the relative strength of the legs, and their mutual support, give the greatest product. Mr Muller, in his *Military Engineer*, gives a determination of the best pitch of a roof, which has considerable ingenuity, and has been copied into many books of military education both in this island and on the continent. Describe on the width AC, fig. 13. the semicircle AFC, and bisect it by the radius FD. Produce the rafter AB to the circumference in E, join EC, and draw the perpendicular EG.— Now $AB : AD = AC : AE$, and $AE = \frac{AD \times AC}{AB}$,

and AE is inversely as AB, and may therefore represent its strength in relation to the weight actually lying on it. Also the support which CB gives to AB is as CE, because CE is perpendicular to AB. Therefore the form which renders $AE \times EC$ a maximum seems to be that which has the greatest strength. But $AC : AE = EC : EG$, and $EG = \frac{AE \cdot EC}{AC}$, and is there-

fore proportional to AE.EC. Now EG is a maximum when B is in F, and a square pitch is in this respect the strongest. But it is very doubtful whether this construction is deduced from just principles. There is another strain to which the leg AB is exposed, which is not taken into the account. This arises from the curvature which it unavoidably acquires by the transverse pressure of its load. In this state it is pressed in its own direction by the abutment and load of the other leg. The relation between this strain and the resistance of the piece is not very distinctly known. Euler has given a dissertation on this subject (which is of great importance, because it affects posts and pillars of all kinds; and it is very well known that a post of ten feet long and six inches square will bear with great safety a weight which would crush a post of the same scantling and 20 feet long in a minute); but his determination has not been acquiesced in by the first mathematicians. Now it is in relation to these two strains that the strength of the rafter should be adjusted. The fineness of the support given by the other leg is of no consequence, if its own strength is inferior to the strain. The force which tends to crush the leg AB, by compressing it in its curved state, is to its weight as AB to BD, as is easily seen by the composition of forces; and its incurvation by this force has a relation to it, which is of intricate determination. It is contained in the properties demonstrated by Bernoulli of the elastic curve. This determination also includes the relation between the curvature and the length of the piece. But the whole of this seemingly simple problem is of much more difficult investigation than Mr Muller was aware of; and his rules for the pitch of a roof, and for the fall of a dock gate, which depends on the same principles, are of no value. He is, however, the first author who attempted to solve either of these problems on mechanical principles susceptible of precise reasoning. Belidor's solutions, in his *Architecture Hydraulique*, are below notice.

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Reasons of economy have made carpenters prefer a low pitch; and although this does diminish the support given by the opposite leg faster than it increases the relative strength of the other, this is not of material consequence, because the strength remaining in the opposite leg is still very great; for the supporting leg is acting against compression, in which case it is vastly stronger than the supported leg acting against a transverse strain.

But a roof of this simplicity will not do in most cases. ³⁵ Thrust on the walls. There is no notice taken in its construction of the thrust which it exerts on the walls. Now this is the strain which is the most hazardous of all. Our ordinary walls, instead of being able to resist any considerable strain pressing them outwards, require, in general, some ties to keep them on foot. When a person thinks of the thinness and height of the walls of even a strong house, he will be surprised that they are not blown down by any strong puff of wind. A wall of three feet thick, and 60 feet high, could not withstand a wind blowing at the rate of 30 feet per second (in which case it acts with a force considerably exceeding two pounds on every square foot), if it were not stiffened by cross walls, joists, and roof, which all help to tie the different parts of the building together.

³⁶ How avoid-
ed. A carpenter is therefore exceedingly careful to avoid every horizontal thrust, or to oppose them by other forces. And this introduces another essential part into the construction of a roof, namely the tie or beam AC, (fig. 14.), laid from wall to wall, binding the feet A and C of the rafters together. This is the sole office of the beam; and it should be considered in no other light than as a string to prevent the roof from pushing out the walls. It is indeed used for carrying the ceiling of the apartments under it; and it is even made to support a flooring. But, considered as making part of a roof, it is merely a string; and the strain which it withstands tends to tear its parts asunder. It therefore acts with its whole absolute force, and a very small scantling would suffice if we could contrive to fasten it firmly enough to the foot of the rafter. If it is of oak, we may safely subject it to a strain of three tons for every square inch of its section. And fir will safely bear a strain of two tons for every square inch. But we are obliged to give the tie-beam much larger dimensions, that we may be able to connect it with the foot of the rafter by a mortise and tenon. Iron straps are also frequently added. By attending to this office of the tie-beam, the judicious carpenter is directed to the proper form of the mortise and tenon and of the strap. We shall consider both of these in a proper place, after we become acquainted with the various strains at the joints of a roof.

These large dimensions of the tie-beam allow us to load it with the ceilings without any risk, and even to lay floors on it with moderation and caution. But when it has a great bearing or span, it is very apt to bend downwards in the middle, or, as the workmen term it, to sway or swag; and it requires a support. The question is, where to find this support? What fixed points can we find with which to connect the middle of the tie-beam? Some ingenious carpenter thought of suspending it from the ridge by a piece of timber BD (fig. 15.), called by our carpenters the *king-post*. It must be acknowledged that there was great ingenuity in this thought. It was also perfectly just. For the weight of the rafters BA, BC tends to make them fly out

Roof.

out at the foot. This is prevented by the tie-beam, and this excites a pressure, by which they tend to compress each other. Suppose them without weight, and that a great weight is laid on the ridge B. This can be supported only by the butting of the rafters in their own directions A B and C B, and the weight tends to compress them in the opposite directions, and, through their intervention, to stretch the tie-beam. If neither the rafters can be compressed, nor the tie-beam stretched, it is plain that the triangle A B C must retain its shape, and that B becomes a fixed point, very proper to be used as a point of suspension. To this point, therefore, is the tie-beam suspended by means of the king-post. A common spectator, unacquainted with carpentry, views it very differently, and the tie-beam appears to him to carry the roof. The king-post appears a pillar resting on the beam, whereas it is really a string; and an iron-rod of one-sixteenth of the size would have done just as well. The king-post is sometimes mortised into the tie-beam, and pins put through the joint, which gives it more the look of a pillar with the roof resting on it. This does well enough in many cases. But the best method is to connect them by an iron strap, like a stirrup, which is bolted at its upper ends into the king-post, and passes round the tie-beam. In this way a space is commonly left between the end of the king-post and the upper side of the tie-beam. Here the beam plainly appears hanging in the stirrup; and this method allows us to restore the beam to an exact level, when it has sunk by the unavoidable compression or other yielding of the parts. The holes in the sides of the iron strap are made oblong instead of round; and the bolt which is drawn through all is made to taper on the under side; so that driving it farther draws the tie-beam upwards. A notion of this may be formed by looking at fig. 16. which is a section of the post and beam.

It requires considerable attention, however, to make this suspension of the tie-beam sufficiently firm. The top of the king-post is cut into the form of the arch-stone of a bridge, and the heads of the rafters are firmly mortised into this projecting part. These projections are called joggles, and are formed by working the king-post out of a much larger piece of timber, and cutting off the unnecessary wood from the two sides; and, lest all this should not be sufficient, it is usual in great works to add an iron-plate or strap of three branches, which are bolted into the heads of the king-post and rafters.

The rafters, though not so long as the beam, seem to stand as much in need of something to prevent their bending, for they carry the weight of the covering.— This cannot be done by suspension, for we have no fixed points above them: But we have now got a very firm point of support at the foot of the king-post.— Braces, or struts, E D, F D, (fig. 17.), are put under the middle of the rafters, where they are slightly mortised, and their lower ends are firmly mortised into joggles formed on the foot of the king-post. As these braces are very powerful in their resistance to compression, and the king-post equally so to resist extension, the points E and F may be considered as fixed; and the rafters being thus reduced to half their former length, have now four times their former relative strength.

Roofs do not always consist of two sloping sides meeting in a ridge. They have sometimes a flat on the top,

with two sloping sides. They are sometimes formed with a double slope, and are called *kirk* or *mansarde roofs*. They sometimes have a valley in the middle, and are then called M roofs. Such roofs require another piece which may be called the *truss beam*, because all such frames are called *trusses*, probably from the French word *troussée*, because such roofs are like portions of plain roofs, *troussées* or shortened.

A flat-topped roof is thus constructed. Suppose the three rafters AB, BC, CD (fig. 18.) of which AB and CD are equal, and BC horizontal. It is plain that they will be in equilibrio, and the roof have no tendency to go to either side. The tie-beam AD withstands the horizontal thrusts of the whole frame, and the two rafters AB and CD are each pressed in their own directions in consequence of their butting with the middle rafter or truss-beam BC. It lies between them like the keystone of an arch. They lean towards it, and it rests on them. The pressure which the truss-beam and its load excites on the two rafters is the very same as if the rafters were produced till they meet in G, and a weight were laid on these equal to that of BC and its load. If therefore the truss-beam is of a scantling sufficient for carrying its own load, and withstanding the compression from the two rafters, the roof will be equally strong (while it keeps its shape) as the plain roof AGD furnished with king-post and braces. We may conceive this another way. Suppose a plain roof AGD, without braces to support the middle B and C of the rafters. Then let a beam BC be put in between the rafters, butting upon little notches cut in the rafters. It is evident that this must prevent the rafters from bending downwards, because the points B and C cannot descend, moving round the centres A and D, without shortening the distance BC between them. This cannot be without compressing the beam BC. It is plain that BC may be wedged in, or wedges driven in between its ends B and C and the notches in which it is lodged. These wedges may be driven in till they even force out the rafters GA and GD. Whenever this happens, all the mutual pressure of the heads of these rafters at G is taken away, and the parts GB and GC may be cut away, and the roof ABCD will be as strong as the roof AGD furnished with the king-post and braces, because the truss-beam gives a support of the same kind at B and C as the brace would have done.

But this roof ABCD would have no firmness of shape. Any addition of weight on one side would destroy the equilibrium at the angle, would depress that angle, and cause the opposite one to rise. To give it stiffness, it must either have ties or braces, or something partaking of the nature of both. The usual method of framing is to make the heads of the rafters butt on the joggles of two side-posts BE and CF, while the truss-beam, or strut as it is generally termed by the carpenters, is mortised square into the inside of the heads. The lower ends E and F of the side-posts are connected with the tie-beam either by mortises or straps.

This construction gives firmness to the frame; for the angle B cannot descend in consequence of any inequality of pressure, without forcing the other angle C to rise. This it cannot do, being held down by the post CF. And the same construction fortifies the tie-beam, which is now suspended at the points E and F from

Roof. from the points B and C, whose firmness we have just now shown.

38
They are
not so
strong as
the plain
roofs.

But although this roof may be made abundantly strong, it is not quite so strong as the plain roof AGD of the same scantling. The compression which BC must sustain in order to give the same support to the rafters at B and C that was given by braces properly placed, is considerably greater than the compression of the braces. And this strain is an addition to the transverse strain which BC gets from its own load. Also this form necessarily exposes the tie-beam to cross strains. If BE is mortised into the tie-beam, then the strain which tends to depress the angle ABC presses on the tie-beam at E transversely, while a contrary strain acts on F, pulling it upwards. These strains however are small; and this construction is frequently used, being susceptible of sufficient strength, without much increase of the dimensions of the timbers; and it has the great advantage of giving free room in the garrets. Were it not for this, there is a much more perfect form represented in fig. 19. Here the two posts BE, CF are united below. All transverse action on the tie-beam is now entirely removed. We are almost disposed to say that this is the strongest roof of the same width and slope: for if the iron strap which connects the pieces BE, CF with the tie beam have a large bolt G through it, confining it to one point of the beam, there are five points A, B, C, D, G, which cannot change their places, and there is no transverse strain in any of the connections.

When the dimensions of the building are very great, so that the pieces AB, BC, CD, would be thought too weak for withstanding the cross strains, braces may be added as is expressed in fig. 18. by the dotted lines. The reader will observe that it is not meant to leave the top flat externally: it must be raised a little in the middle to shoot off the rain. But this must not be done by incurvating the beam BC. This would soon be crushed, and spring upwards. The slopes must be given by pieces of timber added above the strutting beam.

39
Members
of which
the frame
of a roof
consists,

And thus we have completed a frame of a roof. It consists of these principal members: The rafters, which are immediately loaded with the covering; the tie-beam, which withstands the horizontal thrust by which the roof tends to fly out below and push out the walls; the king-posts, which hang from fixed points and serve to uphold the tie-beam, and also to afford other fixed points on which we may rest the braces which support the middle of the rafters; and lastly the truss or strutting-beam, which serves to give mutual abutment to the different parts which are at a distance from each other. The rafters, braces, and trusses are exposed to compression, and must therefore have not only cohesion but stiffness. For if they bend, the prodigious compressions to which they are subjected would quickly crush them in this bended state. The tie-beams and king-posts, if performing no other office but supporting the roof, do not require stiffness, and their places might be supplied by ropes, or by rods of iron of one-tenth part of the section that even the smallest oak stretcher requires. These members require no greater dimensions than what is necessary for giving sufficient joints, and any more is a needless expence and load. All roofs, however complicated, consist of these essential parts, and if pieces of timber are to be seen

which perform none of these offices, they must be pronounced useless, and they are frequently hurtful, by producing cross strains in some other piece. In a roof properly constructed there should be no such strains. All the timbers, except those which immediately carry the covering, should be either pushed or drawn in the direction of their length. And this is the rule by which a roof should always be examined.

These essential parts are susceptible of numberless combinations and varieties. But it is a prudent maxim to make the construction as simple, and consisting of as few parts, as possible. We are less exposed to the imperfections of workmanship, such as loose joints, &c. Another essential harm arises from many pieces, by the compression and the shrinking of the timber in the cross direction of the fibres. The effect of this is equivalent to the shortening of the piece which butts on the joint. This alters the proportions of the sides of the triangle on which the shape of the whole depends. Now in a roof such as fig. 18. there is twice as much of this as in the plain pent roof, because there are two posts. And when the direction of the butting pieces is very oblique to the action of the load, a small shrinking permits a great change of shape. Thus in a roof of what is called pediment pitch, where the rafters make an angle of 30 degrees with the horizon, half an inch compression of the king-post will produce a sagging of an inch, and occasion a great strain on the tie-beam if the posts are mortised into it. In fig. 2. of the roofs in the article ARCHITECTURE, half an inch shrinking of each of the two posts will allow the middle to sag above five inches. Fig. 1. of the same plate is faulty in this respect, by cutting the strutting-beam in the middle. The strutting-beam is thus shortened by three shrinkings, while there is but one to shorten the rafters. The consequence is, that the truss which is included within the rafters will sag away from them, and then they must bend in the middle till they again rest on this included truss. This roof is, however, constructed on the whole on good principles, and we adduce it only to show the advantages of simplicity. This cutting of the strutting-beam is unavoidable, if we would preserve the king-post. But we are in doubt whether the service performed by it in this case will balance the inconvenience. It is employed only to support the middle of the upper half of each rafter, which it does but imperfectly, because the braces and strut must be cut half through at their crossing: if these joints are made tight, as a workman would wish to do, the settling of the roof will cause them to work on each other crosswise with insuperable force, and will undoubtedly strain them exceedingly.

This method of including a truss within the rafters of a pent roof is a very considerable addition to the art of carpentry. But to insure its full effect, it should always be executed in the manner represented in fig. 1. Plate XLVIII. with butting rafters under the principal ones, butting on joggles in the heads of the posts. Without this the strut-beam is hardly of any service. We would therefore recommend fig. 20. as a proper construction of a trussed roof, and the king-post which is placed in it may be employed to support the upper part of the rafters, and also for preventing the strut-beam from bending in either direction in consequence of its great compression. It will also give a suspension for the great burdens which are sometimes necessary in

Roof.

40
Are suscep-
tible of
numberless
combina-
tions and
varieties.

Plate
XLVIII.

Plate
CCCCXL.

Roof.

a theatre. The machinery has no other firm points to which it can be attached; and the portion of the single rafters which carry this king-post are but short, and therefore may be considerably loaded with safety.

We observe in the drawings which we sometimes have of Chinese buildings, that the trussing of roofs is understood by them. Indeed they must be very experienced carpenters. We see wooden buildings run up to a great height, which can be supported only by such trussing. One of these is sketched in fig. 21. There are some very excellent specimens to be seen in the buildings at Deptford, belonging to the victualling-office, usually called the *Red House*, which were erected about the year 1788, and we believe are the performance of Mr James Arrow of the Board of Works, one of the most intelligent artists in this kingdom.

41
Remarks
addressed to
practical
carpenters.

Thus have we given an elementary, but a rational or scientific, account of this important part of the art of carpentry. It is such, that any practitioner, with the trouble of a little reflection, may always proceed with confidence, and without resting any part of his practice on the vague notions which habit may have given him of the strength and supports of timbers, and of their manner of acting. That these frequently mislead, is proved by the mutual criticisms which are frequently published by the rivals in the profession. They have frequently sagacity enough (for it can seldom be called science) to point out glaring blunders; and any person who will look at some of the performances of Mr Price, Mr Wyatt, Mr Arrow, and others of acknowledged reputation, will readily see them distinguishable from the works of inferior artists by simplicity alone. A man without principles is apt to consider an intricate construction as ingenious and effectual; and such roofs sometimes fail merely by being ingeniously loaded with timber, but more frequently still by the wrong action of some useless piece, which produces strains that are transverse to other pieces, or which, by rendering some points too firm, cause them to be deserted by the rest in the general subsiding of the whole. Instances of this kind are pointed out by Price in his *British Carpenter*. Nothing shows the skill of a carpenter more than the distinctness with which he can foresee the changes of shape which must take place in a short time in every roof. A knowledge of this will often correct a construction which the mere mathematician thinks unexceptionable, because he does not reckon on the actual compression which must obtain, and imagines that his triangles, which sustain no cross strains, invariably retain their shape till the pieces break. The sagacity of the experienced carpenter is not, however, enough without science for perfecting the art. But when he knows how much a particular piece will yield to compression in one case, science will tell him, and nothing but science can do it, what will be the compression of the same piece in another very different case. Thus he learns how far it will now yield, and then he proportions the parts so to each other, that when all have yielded according to their strains, the whole is of the shape he wished to produce, and every joint is in a state of firmness. It is here that we observe the greatest number of improprieties. The iron straps are frequently in positions not suited to the actual strain on them, and they are in a state of violent twist, which both tends strongly to

break the strap, and to cripple the pieces which they surround. Roof.

In like manner, we frequently see joints or mortises in a state of violent strain on the tenons, or on the heels and shoulders. The joints were perhaps properly shaped to the primitive form of the truss; but by its settling, the bearing on the push is changed: the brace, for example, in a very low pitched roof, comes to press with the upper part of the shoulder, and, acting as a powerful lever on the tenon, breaks it. In like manner, the lower end of the brace, which at first butted firmly and squarely on the joggle of the king-post, now presses with one corner with prodigious force, and seldom fails to splinter off on that side. We cannot help recommending a maxim of Mr Perronet the celebrated hydraulic architect of France, as a golden rule, viz. to make all the shoulders of butting pieces in the form of an arch of a circle, having the opposite end of the piece for its centre. Thus, in fig. 18. if the joggle-joint B be of this form, having A for its centre, the sagging of the roof will make no partial bearing at the joint; for in the sagging of the roof, the piece AB turns or bends round the centre A, and the counter-pressure of the joggle is still directed to A, as it ought to be. We have just now said *bends* round A. This is too frequently the case, and it is always very difficult to give the tenon and mortise in this place a true and invariable bearing. The rafter pushes in the direction BA, and the beam resists in the direction AD. The abutment should be perpendicular to neither of these but in an intermediate direction, and it ought also to be of a curved shape. But the carpenters perhaps think that this would weaken the beam too much to give it this shape in the shoulder; they do not even aim at it in the heel of the tenon. The shoulder is commonly even with the surface of the beam. When the bearing therefore is on this shoulder, it causes the foot of the rafter to slide along the beam till the heel of the tenon bears against the outer end of the mortise (See Price's *British Carpenter*, Plate C. fig. 1 K). This abutment is perpendicular to the beam in Price's book, but it is more generally pointed a little outwards below, to make it more secure against starting. The consequence of this construction is, that when the roof settles, the shoulder comes to bear at the inner end of the mortise, and it rises at the outer, and the tenon taking hold of the wood beyond it, either tears it out or is itself broken. This joint therefore is seldom trusted to the strength of the mortise and tenon, and is usually secured by an iron strap, which lies obliquely to the beam, to which it is bolted by a large bolt quite through, and then embraces the outside of the rafter foot. Very frequently this strap is not made sufficiently oblique, and we have seen some made almost square with the beam. When this is the case, it not only keeps the foot of the rafter from flying out, but it binds it down. In this case, the rafter acts as a powerful lever, whose fulcrum is the inner angle of the shoulder, and then the strap never fails to cripple the rafter at the point. All this can be prevented only by making the strap very long and very oblique, and by making its outer end (the stirrup part) square with its length, and making a notch in the rafter foot to receive it. It cannot now cripple the rafter, for it will rise along with it, turning round the

Foot. the bolt at its inner end. We have been thus particular on this joint, because it is here that the ultimate strain of the whole roof is exerted, and its situation will not allow the excavation necessary for making it a good mortise and tenon.

Similar attention must be paid to some other straps, such as those which embrace the middle of the rafter, and connect it with the post or truss below it. We must attend to the change of shape produced by the sagging of the roof, and place the strap in such a manner as to yield to it by turning round its bolt, but so as not to become loose, and far less to make a fulcrum for any thing acting as a lever. The strains arising from such actions, in framings of carpentry which change their shape by sagging, are enormous, and nothing can resist them.

42 Mode of calculating strains or thrusts, We shall close this part of the subject with a simple method, by which any carpenter, without mathematical science, may calculate with sufficient precision the strains or thrusts which are produced on any point of his work, whatever be the obliquity of the pieces.

Let it be required to find the horizontal thrust acting on the tie-beam AD of fig. 18. This will be the same as if the weight of the whole roof were laid at G on the two rafters GA and GD. Draw the vertical line GH. Then, having calculated the weight of the whole roof that is supported by this single frame ABCD, including the weight of the pieces AB, BC, CD, BE, CF themselves, take the number of pounds, tons, &c. which expresses it from any scale of equal parts, and set it from G to H. Draw HK, HL parallel to GD, GA, and draw the line KL, which will be horizontal when the two sides of the roof have the same slope. Then ML measured on the same scale will give the horizontal thrust, by which the strength of the tie-beam is to be regulated. GL will give the thrust which tends to crush the rafters, and LM will also give the force which tends to crush the strut-beam BC.

In like manner, to find the strain on the king-post BD of fig. 17. consider that each brace is pressed by half the weight of the roofing laid on BA or BC, and this pressure, or at least its hurtful effect, is diminished in the proportion of BA to DA, because the action of gravity is vertical, and the effect which we want to counteract by the braces is in a direction Ee perpendicular to BA or BC. But as this is to be resisted by the brace fE acting in the direction fE, we must draw fe perpendicular to Ee, and suppose the strain augmented in the proportion of Ee to Ef.

Having thus obtained in tons, pounds, or other measures, the strains which must be balanced at f by the cohesion of the king-post, take this measure from the scale of equal parts, and set it off in the directions of the braces to G and H, and complete the parallelogram GfHK; and fK measured on the same scale will be the strain on the king-post.

43 And the strength of the truss. The artist may then examine the strength of his truss upon this principle, that every square inch of oak will bear at an average 7000 pounds compressing or stretching it, and may be safely loaded with 3500 for any length of time; and that a square inch of fir will in like manner securely bear 2500. And, because straps are used to resist some of these strains, a square inch of well wrought tough iron may be safely strained

by 50,000 pounds. But the artist will always reflect, that we cannot have the same confidence in iron as in timber. The faults of this last are much more easily perceived; and when timber is too weak, it gives us warning of its failure, by yielding sensibly before it breaks. This is not the case with iron; and much of its service depends on the honesty of the blacksmith.

44 In this way may any design of a roof be examined. We shall here give the reader a sketch of two or three trussed roofs, which have been executed in the chief varieties of circumstances which occur in common practice. *Sketch of some trussed roofs, &c.*

Fig. 22. is the roof of St Paul's Church, Covent Garden, London, the work of Inigo Jones. Its construction is singular. The roof extends to a considerable distance beyond the building, and the ends of the tie-beams support the Tuscan cornice, appearing like the mutules of the Doric order. Such a roof could not rest on the tie-beam. Inigo Jones has therefore supported it by a truss below it; and the height has allowed him to make this extremely strong with very little timber. It is accounted the highest roof of its width in London. But this was not difficult, by reason of the great height which its extreme width allowed him to employ without hurting the beauty of it by too high a pitch. The supports, however, are disposed with judgment.

Fig. 23. is a kirb or mansard roof by Price, and supposed to be of large dimensions, having braces to carry the middle of the rafters.

It will serve exceedingly well for a church having pillars. The middle part of the tie-beam being taken away, the strains are very well balanced, so that there is no risk of its pushing aside the pillars on which it rests.

Fig. 24. is the celebrated roof of the theatre of the university of Oxford, by Sir Christopher Wren. The span between the walls is 75 feet. This is accounted a very ingenious, and is a singular performance. The middle part of it is almost unchangeable in its form; but from this circumstance it does not distribute the horizontal thrust with the same regularity as the usual construction. The horizontal thrust on the tie-beam is about twice the weight of the roof, and is withstood by an iron strap below the beam, which stretches the whole width of the building in the form of a rope, making part of the ornament of the ceiling.

45 In all the roofs which we have considered hitherto the thrust is discharged entirely from the walls by the tie-beam. But this cannot always be done. We frequently want great elevation within, and arched ceilings. In such cases, it is a much more difficult matter to keep the walls free of all pressure outwards, and there are few buildings where it is completely done. Yet this is the greatest fault of a roof. We shall just point out the methods which may be most successfully adopted. *Cases in which the thrust cannot be discharged from the walls by the tie-beam.*

We have said that a tie-beam just performs the office of a string. We have said the same of the king-post. Now suppose two rafters AB, BC (fig. 25.) moveable about the joint B, and resting on the top of the walls. If the line BD be suspended from B, and the two lines DA, DC be fastened to the feet of the rafters, and if these lines be incapable of extension, it is plain that all thrust is removed from the walls as effectually

Roof. fectually as by a common tie-beam. And by shortening BD to Bd, we gain a greater inside height, and more room for an arched ceiling. Now if we substitute a king-post BD (fig. 26.) and two stretchers or hammer-beams DA, DC for the other strings, and connect them firmly by means of iron straps, we obtain our purpose.

Let us compare this roof with a tie-beam roof in point of strain and strength. Recur to fig. 25. and complete the parallelogram ABCF, and draw the diagonals AC, BF crossing in E. Draw BG perpendicular to CD. We have seen that the weight of the roof (which we may call W) is to the horizontal thrust at C as BF to EC; and if we express this thrust by

T, we have $T = \frac{W \times EC}{BF}$. We may at present con-

sider BC as a lever moveable round the joint B, and pulled at C in the direction EC by the horizontal thrust, and held back by the string pulling in the direction CD. Suppose that the forces in the directions EC and CD are in equilibrio, and let us find the force S by which the string CD is strained. These forces must (by the property of the lever) be inversely as the perpendiculars drawn from the centre of motion on the lines of their direction. Therefore $BG : BE = T : S$,

$$\text{and } S = T \times \frac{BE}{BG} = W \times \frac{BE \cdot EC}{BF \cdot BG}$$

Therefore the strain upon each of the ties DA and DC is always greater than the horizontal thrust or the strain on a simple tie-beam. This would be no great inconvenience, because the smallest dimensions that we could give to these ties, so as to procure sufficient fixtures to the adjoining pieces, are always sufficient to withstand this strain. But although the same may be said of the iron straps which make the ultimate connections, there is always some hazard of imperfect work, cracks or flaws, which are not perceived. We can judge with tolerable certainty of the soundness of a piece of timber, but cannot say so much of a piece of iron. Moreover, there is a prodigious strain excited on the king-post, when BG is very short in comparison of BE, namely, the force compounded of the two strains S and S on the ties DA and DC.

But there is another defect from which the straight tie-beam is entirely free. All roofs settle a little.—When this roof settles, and the points B and D descend, the legs BA, BC must spread further out, and thus a pressure outwards is excited on the walls. It is seldom therefore that this kind of roof can be executed in this simple form, and other contrivances are necessary for counteracting this supervening action on the walls. Fig. 27. is one of the best which we have seen, and is executed with great success in the circus or equestrian theatre in Edinburgh, the width being 60 feet. The pieces EF and ED help to take off some of the weight, and by their greater uprightness they exert a smaller thrust on the walls. The beam Dd is also a sort of truss-beam, having something of the same effect. Mr Price has given another very judicious one of this kind, British Carpenter, Plate IK, fig. C, from which the tie-beam may be taken away, and there will remain very little thrust on the walls. Those which he has given in the following Plate K are, in our opinion, very faulty. The whole strain in these last roofs tends to break the rafters and ties transversely, and the fixtures of

Roof. the ties are also not well calculated to resist the strain to which the pieces are exposed. We hardly think that these roofs could be executed.

It is scarcely necessary to remind the reader, that in all that we have delivered on this subject, we have attended only to the construction of the principal rafters or crusses. In small buildings all the rafters are of one kind; but in great buildings the whole weight of the covering is made to rest on a few principal rafters, which are connected by beams placed horizontally, and either mortised into them or scarfed on them. These are called *purlins*. Small rafters are laid from purlin to purlin; and on these the laths for tiles, or the skirting-boards for slates, are nailed. Thus the covering does not immediately rest on the principal frames. This allows some more liberty in their construction, because the garrets can be so divided that the principal rafters shall be in the partitions and the rest left unincumbered. This construction is so far analogous to that of floors which are constructed with girders, binding, and bridging joists.

It may appear presuming in us to question the propriety of this practice. There are situations in which it is unavoidable, as in the roofs of churches, which can be allowed to rest on some pillars. In other situations, where partition-walls intervene at a distance not too great for a stout purlin, no principal rafters are necessary, and the whole may be roofed with short rafters of very slender scantling. But in a great uniform roof, which has no intermediate supports, it requires at least some reasons for preferring this method of carcase-roofing to the simpler method of making all the rafters alike. The method of carcase-roofing requires the selection of the greatest logs of timber, which are seldom of equal strength and soundness with thinner rafters. In these the outside planks can be taken off, and the best part alone worked up. It also exposes to all the defects of workmanship in the mortising of purlins, and the weakening of the rafters by this very mortising; and it brings an additional load of purlins and short rafters. A roof thus constructed may surely be compared with a floor of similar construction. Here there is not a shadow of doubt, that if the girders were sawed into planks, and these planks laid as joists sufficiently near for carrying the flooring boards, they will have the same strength as before, except so much as is taken out of the timber by the saw. This will not amount to one-tenth part of the timber in the binding, bridging, and ceiling joists, which are an additional load; and all the mortises and other joinings are so many diminutions of the strength of the girders; and as no part of a carpenter's work requires more skill and accuracy of execution, we are exposed to many chances of imperfection. But, not to rest on these considerations, however reasonable they may appear, we shall relate an experiment made by one on whose judgment and exactness we can depend.

Two models of floors were made 18 inches square of the finest uniform deal, which had been long seasoned. The one consisted of simple joists, and the other was framed with girders, binding, bridging, and ceiling joists. The plain joists of the one contained the same quantity of timber with the girders alone of the other, and both were made by a most accurate workman. They were placed in wooden trunks 18 inches square within,

Roof. within, and rested on a strong projection on the inside. Small shot was gradually poured in upon the floors, so as to spread uniformly over them. The plain joisted floor broke down with 487 pounds, and the carcase floor with 327. The first broke without giving any warning; the other gave a violent crack when 294 pounds had been poured in.

A trial had been made before, and the loads were 341 and 482. But the models having been made by a less accurate hand, it was not thought a fair specimen of the strength which might be given to a carcase floor.

The only argument of weight which we can recollect in favour of the compound construction of roofs is, that the plain method would prodigiously increase the quantity of work, would admit nothing but long timber, which would greatly add to the expence, and would make the garrets a mere thicket of planks. We admit this in its full force; but we continue to be of the opinion that plain roofs are greatly superior in point of strength, and therefore should be adopted in cases where the great difficulty is to insure this necessary circumstance.

48
Of the
roofs
put on
round
buildings.

It would appear very neglectful to omit an account of the roofs put on round buildings, such as domes, cupolas, and the like. They appear to be the most difficult tasks in the carpenter art. But the difficulty lies entirely in the mode of framing, or what the French call the *trait de charpenterie*. The view which we are taking of the subject, as a part of mechanical science, has little connection with this. It is plain, that whatever form of a truss is excellent in a square building must be equally so as one of the frames of a round one; and the only difficulty is how to manage their mutual intersections at the top. Some of them must be discontinued before they reach that length, and common sense will teach us to cut them short alternately, and always leave as many, that they may stand equally thick as at their first springing from the base of the dome. Thus the length of the purlins which reach from truss to truss will never be too great.

The truth is, that a round building which gathers in at top, like a glass-house, a potter's kiln, or a spire steeple, instead of being the most difficult to erect with stability, is of all others the easiest. Nothing can show this more forcibly than daily practice, where they are run up without centres and without scaffoldings; and it requires gross blunders indeed in the choice of their outline to put them in much danger of falling from a want of equilibrium. In like manner, a dome of carpentry can hardly fall, give it what shape or what construction you will. It cannot fall unless some part of it flies out at the bottom: an iron hoop round it, or straps at the joinings of the trusses and purlins, which make an equivalent to a hoop, will effectually secure it. And as beauty requires that a dome shall spring almost perpendicularly from the wall, it is evident that there is hardly any thrust to force out the walls. The only part where this is to be guarded against is, where the tangent is inclined about 40 or 50 degrees to the horizon. Here it will be proper to make a course of firm horizontal joinings.

We doubt not but that domes of carpentry will now be raised of great extent. The Halle du Bles at Paris, of 200 feet in diameter, was the invention of an in-

telligent carpenter, the Sieur Moulineau. He was not by any means a man of science, but had much more mechanical knowledge than artificers usually have, and was convinced that a very thin shell of timber might not only be so shaped as to be nearly in equilibrio, but that if hooped or firmly connected horizontally, it would have all the stiffness that was necessary; and he presented his project to the magistracy of Paris. The grandeur of it pleased them, but they doubted of its possibility. Being a great public work, they prevailed on the Academy of Sciences to consider it. The members, who were competent judges, were instantly struck with the justness of Mr Moulineau's principles, and astonished that a thing so plain had not been long familiar to every house-carpenter. It quickly became an universal topic of conversation, dispute, and cabal, in the polite circles of Paris. But the Academy having given a very favourable report of their opinion, the project was immediately carried into execution, and soon completed, and now stands as one of the great exhibitions of Paris.

The construction of this dome is the simplest thing that can be imagined. The circular ribs which compose it consist of planks nine feet long, 13 inches broad, and three inches thick; and each rib consists of three of these planks bolted together in such a manner that two joints meet. A rib is begun, for instance, with a plank of three feet long standing between one of six feet and another of nine, and this is continued to the head of it. No machinery was necessary for carrying up such small pieces, and the whole went up like a piece of bricklayer's work. At various distances these ribs were connected horizontally by purlins and iron straps, which made so many hoops to the whole. When the work had reached such a height, that the distance of the ribs was two-thirds of the original distance, every third rib was discontinued, and the space was left open and glazed. When carried so much higher that the distance of the ribs is one-third of the original distance, every second rib (now consisting of two ribs very near each other) is in like manner discontinued, and the void is glazed. A little above this the heads of the ribs are framed into a circular ring of timber, which forms a wide opening in the middle; over which is a glazed canopy or umbrella, with an opening between it and the dome for allowing the heated air to get out. All who have seen this dome say, that it is the most beautiful and magnificent object they have ever beheld.

The only difficulty which occurs in the construction of wooden domes is, when they are unequally loaded, by carrying a heavy lantern or cupola in the middle. In such a case, if the dome were a mere shell, it would be crushed in at the top, or the action of the wind on the lantern might tear it out of its place. Such a dome must therefore consist of trussed frames. Mr Price has given a very good one in his plate OP, tho' much stronger in the trusses than there was any occasion for. This causes a great loss of room, and throws the lights of the lantern too far up. It is evidently copied from Sir Christopher Wren's dome of St Paul's church in London; a model of propriety in its particular situation, but by no means a general model of a wooden dome. It rests on the brick cone within it; and Sir Christopher has very ingeniously made use of it for stiffening this cone, as any intelligent person

Roof.

Roof.

person will perceive by attending to its construction (See *Price*, Plate OP).

Fig. 28. represents a dome executed in the Register Office in Edinburgh by James and Robert Adams, and is very agreeable to mechanical principles. The span is 50 feet clear, and the thickness is only 4½.

49
Further re-
marks on
Norman
roofs.

We cannot take leave of the subject without taking some notice of what we have already spoken of with commendation by the name of *Norman roofs*. We called them *Norman*, because they were frequently executed by that people soon after their establishment in Italy and other parts of the south of Europe, and became the prevailing taste in all the great baronial castles. Their architects were rivals to the Saracens and Moors, who about that time built many Christian churches; and the architecture which we now call Gothic seems to have arisen from their joint labours.

The principle of a Norman roof is extremely simple. The rafters all butted on joggled king-posts AF, BG, CH, &c. (fig. 29.), and braces or ties were then disposed in the intervals. In the middle of the roof HB and HD are evidently ties in a state of extension, while the post CH is compressed by them. Towards the walls on each side, as between B and F, and between F and L, they are braces, and are compressed. The ends of the posts were generally ornamented with knots of flowers, embossed globes, and the like, and the whole texture of the truss was exhibited and dressed out.

This construction admits of employing very short timbers; and this very circumstance gives greater strength to the truss, because the angle which the brace or tie makes with the rafter is more open. We may also perceive that all thrust may be taken off the walls. If the pieces AF, BF, LF, be removed, all the remaining diagonal pieces act as ties, and the pieces directed to the centre act as struts; and it may also be observed, that the principle will apply equally to a straight or flat roof or to a floor. A floor such as *abc*, having the joint in two pieces *ab*, *bc*, with a strut *bd*, and two ties, will require a much greater weight to break it than if it had a continued joist *ac* of the same scantling. And, lastly, a piece of timber acting as a tie is much stronger than the same piece acting as a strut: for in the latter situation it is exposed to bending, and when bent it is much less able to withstand a very great strain. It must be acknowledged, however, that this advantage is balanced by the great inferiority of the joints in point of strength. The joint of a tie depends wholly on the pins; for this reason ties are never used in heavy works without strapping the joints with iron. In the roofs we are now describing the diagonal pieces of the middle part only act purely as ties, while those towards the sides act as struts or braces. Indeed they are seldom of so very simple construction as we have described, and are more generally constructed like the sketch in fig. 30. having two sets of rafters AB, *ab*, and the angles are filled up with thin planks, which give great stiffness and strength. They have also a double set of purlins, which connect the different trusses. The roof being thus divided into squares, other purlins run between the middle points E of the rafters. The rafter is supported at E by a check put between it and the under rafter. The middle point of each square of

the roof is supported and stiffened by four braces, one of which springs from *e*, and its opposite from the similar part of the adjoining truss. The other two braces spring from the middle points of the lower purlins, which go horizontally from *a* and *b* to the next truss, and are supported by planks in the same manner as the rafters. By this contrivance the whole becomes very stiff and strong.

We hope that the reader will not be displeased with our having taken some notice of what was the pride of our ancestors, and constituted a great part of the finery of the grand hall, where the feudal lord assembled his vassals and displayed his magnificence. The intelligent mechanic will see much to commend; and all who look at these roofs admire their apparent flimsy lightness, and wonder at their duration. We have seen a hall of 57 feet wide, the roof of which was in four divisions, like a kirb roof, and the trusses were about 16 feet asunder. They were single rafters, as in fig. 30. and their dimensions were only eight inches by six. The roof appeared perfectly sound, and had been standing ever since the year 1425.

Much of what has been said on this subject may be applied to the construction of wooden bridges and the centres for turning the arches of stone-bridges. But the farther discussion of this must be the employment of another article.

ROOFING, the materials of which the roof of a house is composed. See the foregoing article.

ROOK, in ornithology. See CORVUS.

Rooks are very destructive of corn, especially of wheat. They search out the lands where it is sown, and watching them more carefully than the owners, they perceive when the seed first begins to shoot up its blade; this is the time of their feeding on it. They will not be at the pains of searching for it at random in the sown land, for that is more trouble than so small a grain will requite them for: but as soon as these blades appear, they are by them directed, without loss of time or pains, to the places where the grains lie; and in three or four days time they will root up such vast quantities, that a good crop is often thus destroyed in embryo. After a few days the wheat continuing to grow, its blades appear green above ground; and then the time of danger from these birds is over; for then the seeds are so far robbed of their mealy matter, that they are of no value to that bird, and it will no longer give itself the trouble to destroy them.

Wheat that is sown so early as to shoot up its green blades before the harvest is all carried in, is in no danger from these birds; because while it is in a state worth their searching for, the scattered corn in the harvest fields is easier come at, and they feed wholly on this, neglecting the sown grain. But as this cannot always be done, the farmers, to drive away these ravenous and mischievous birds, dig holes in the ground and stick up the feathers of rooks in them, and hang up dead rooks on sticks in several parts of the fields: but all this is of very little use; for the living rooks will tear up the ground about the feathers, and under the dead ones, to steal the seeds. A much better way than either is to tear several rooks to pieces, and to scatter the pieces over the fields; but this lasts but a little while, for the kites and other birds of prey soon carry off the pieces and feed upon them. A gun is a good remedy while

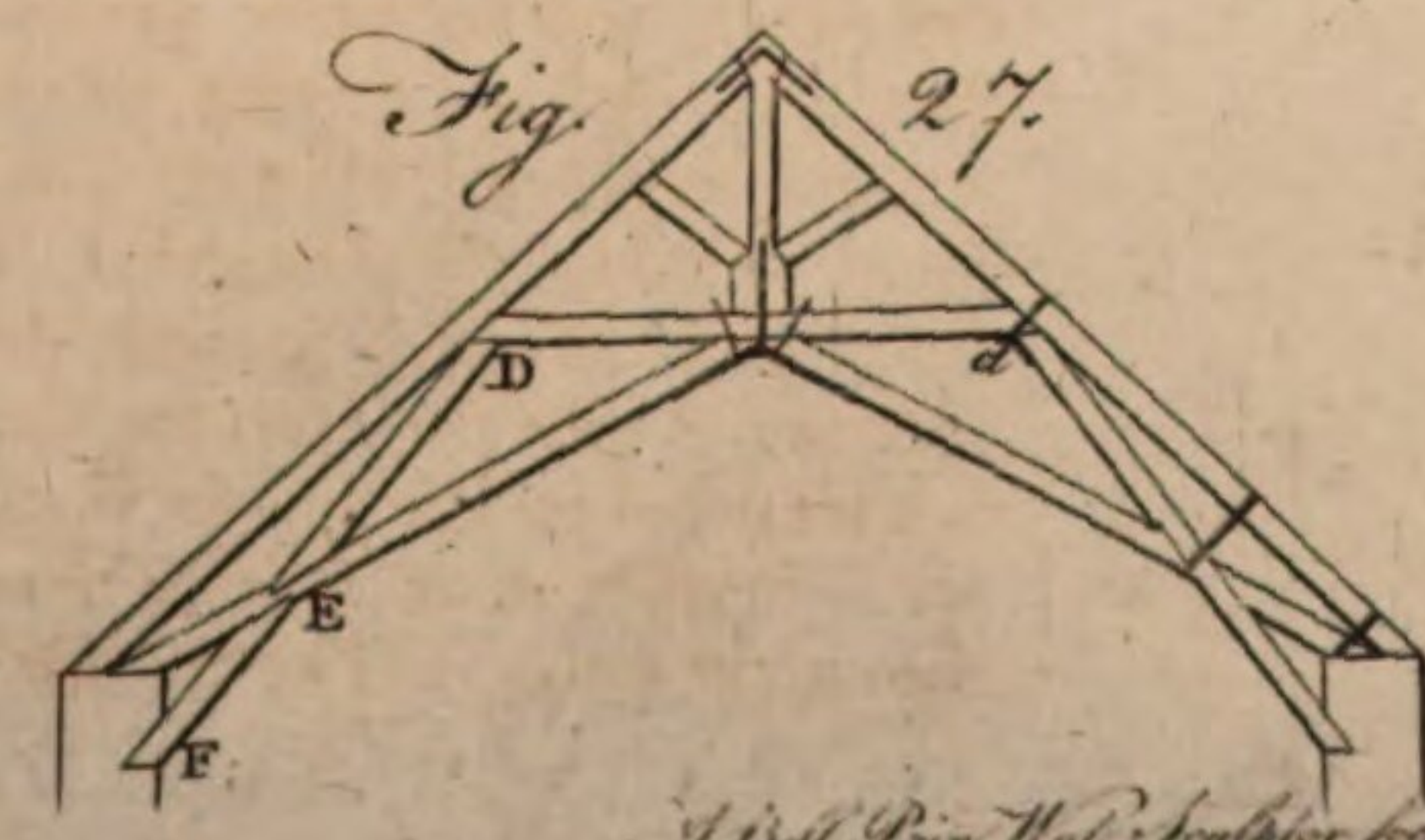
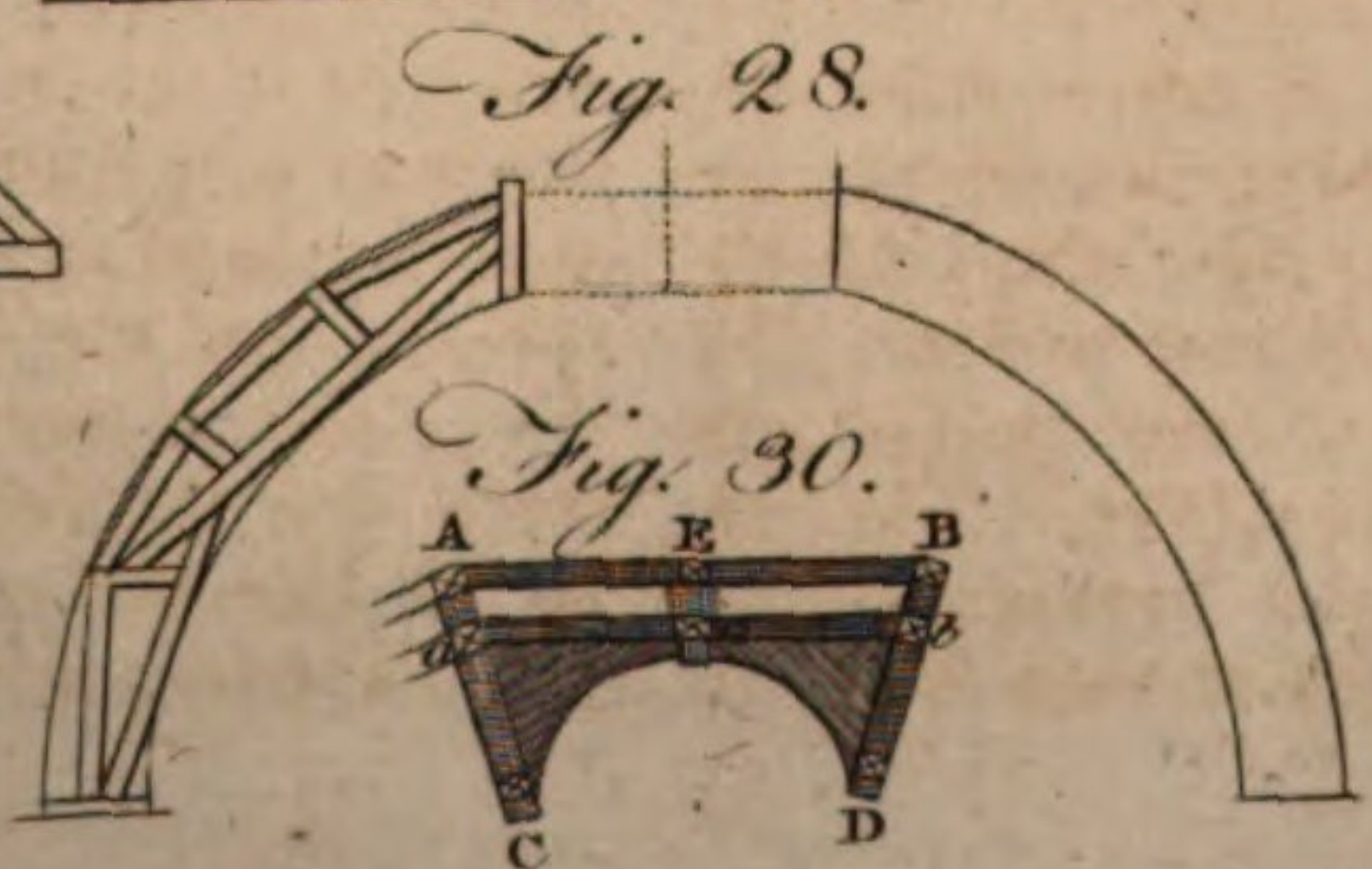
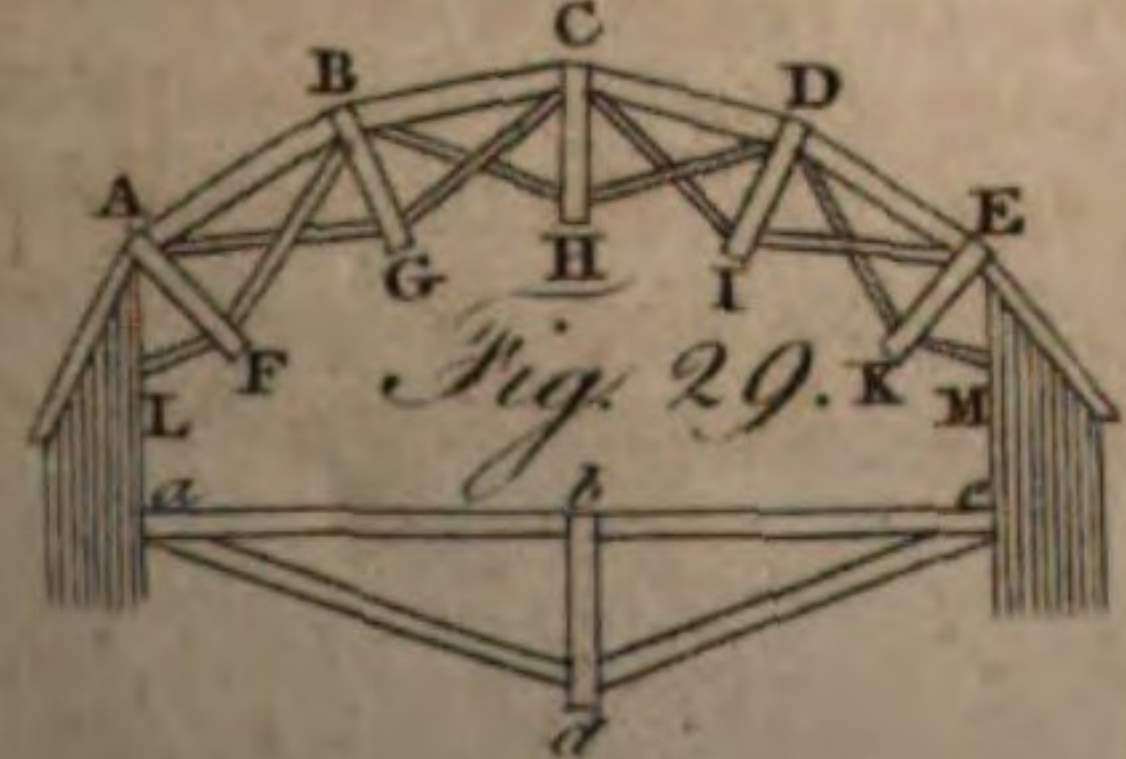
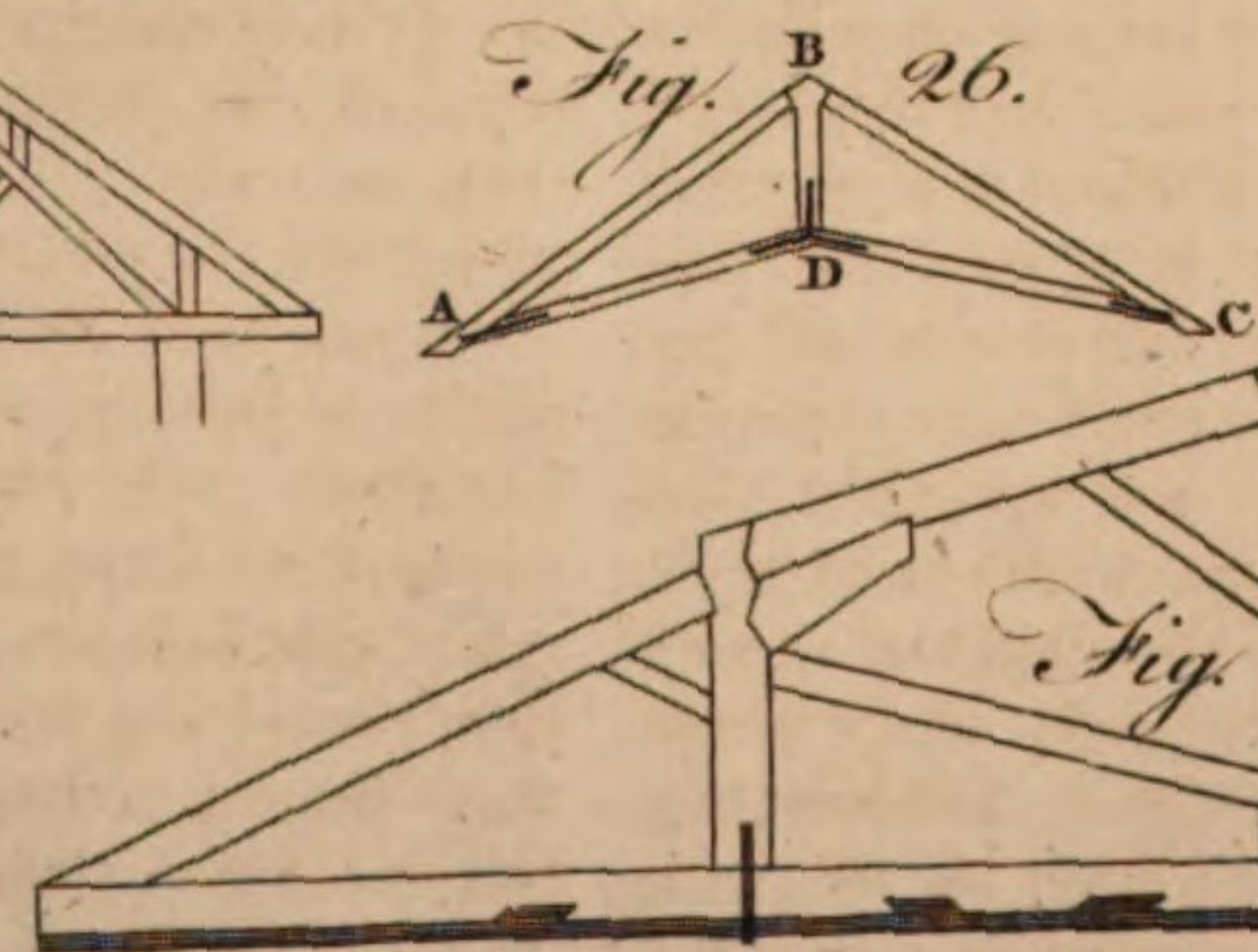
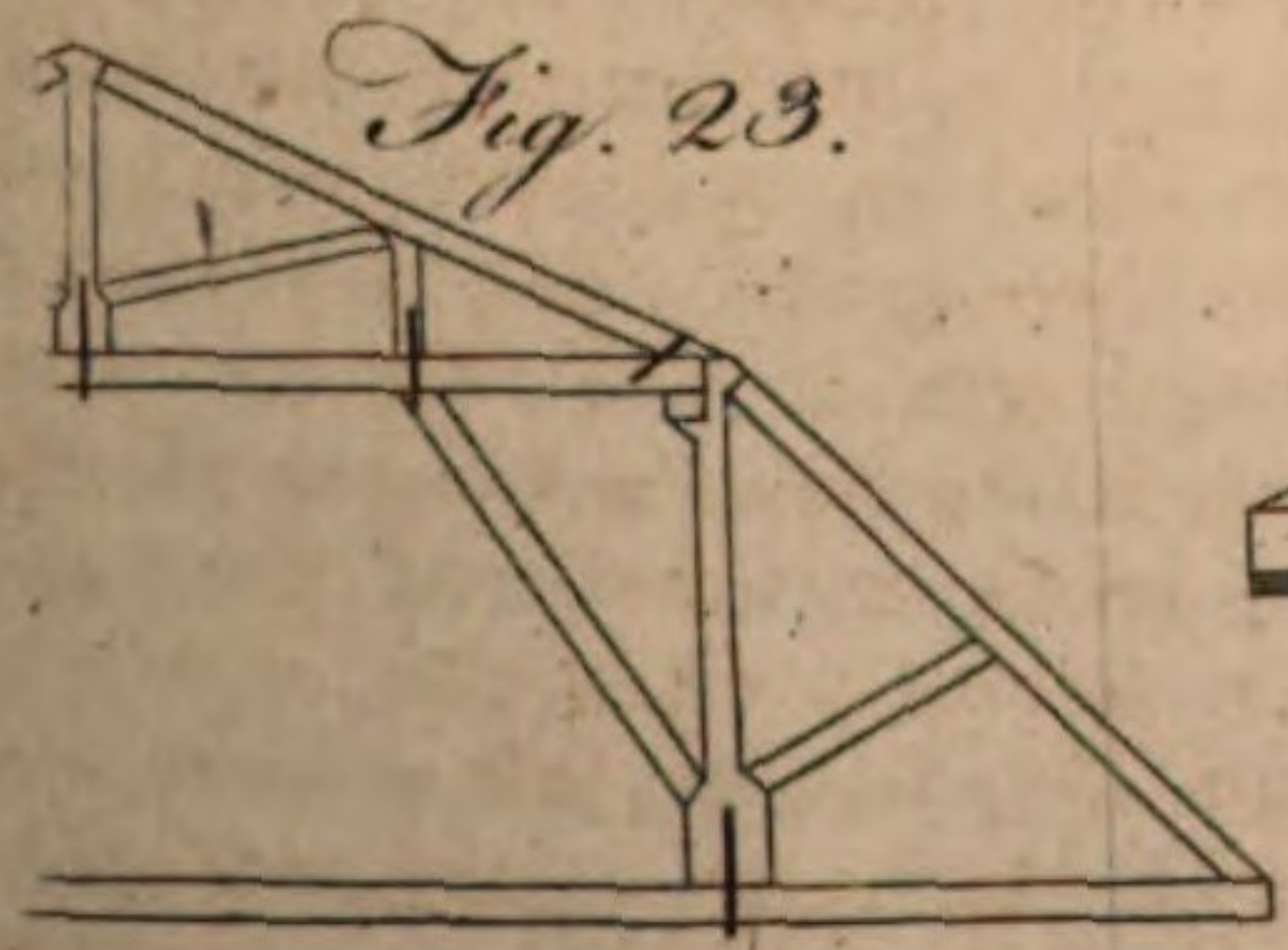
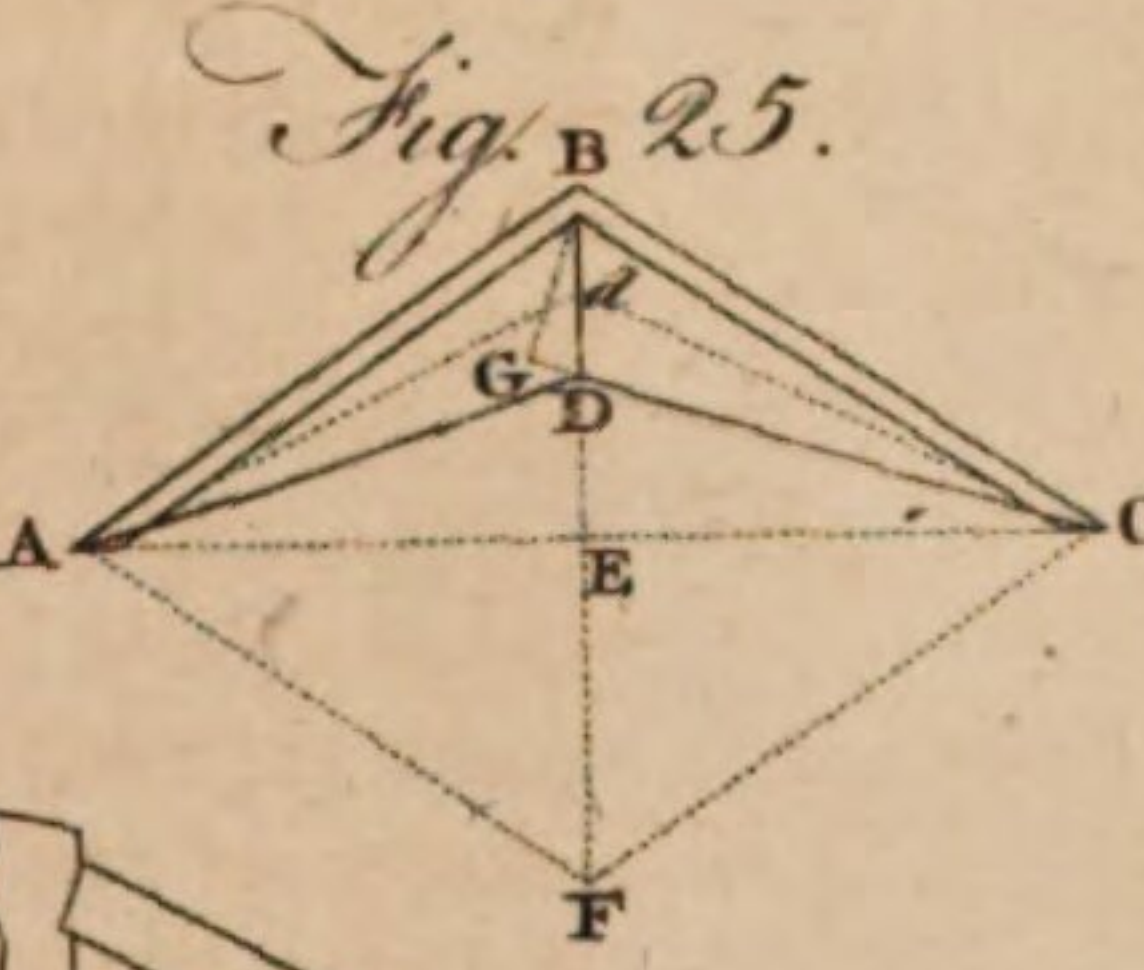
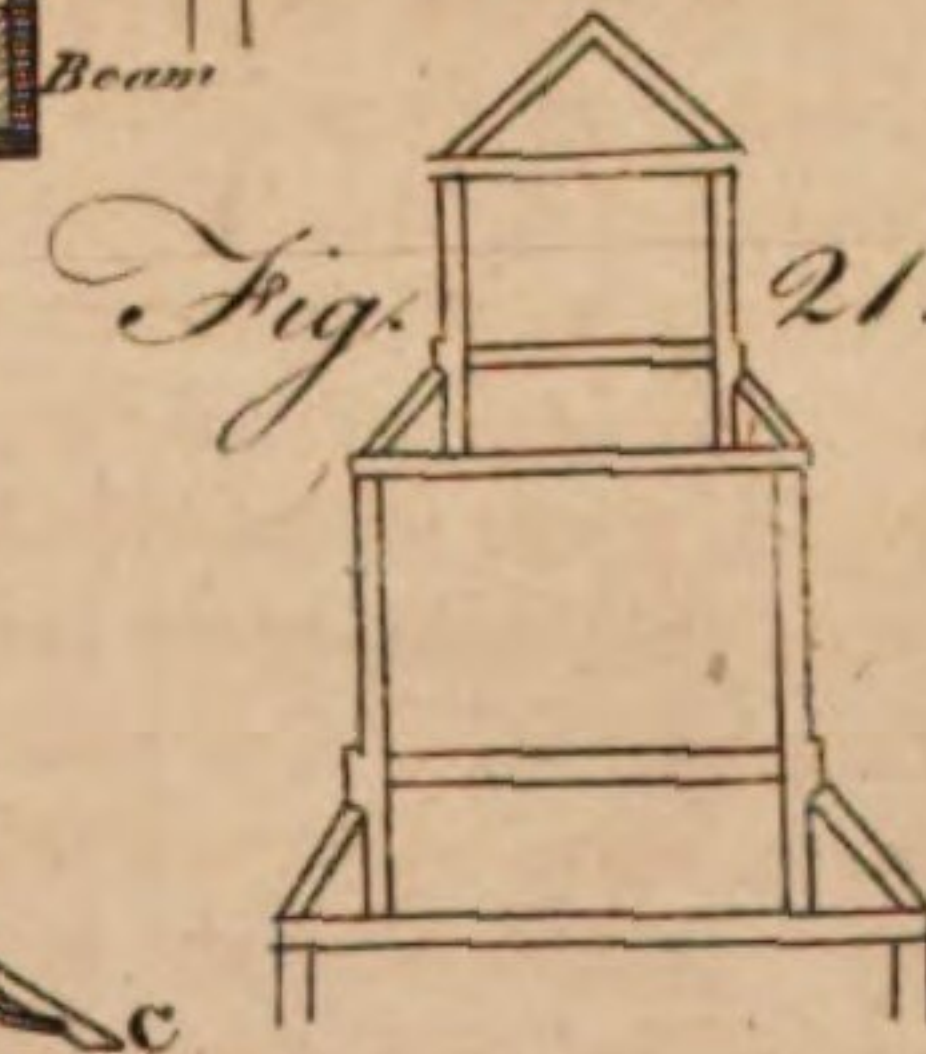
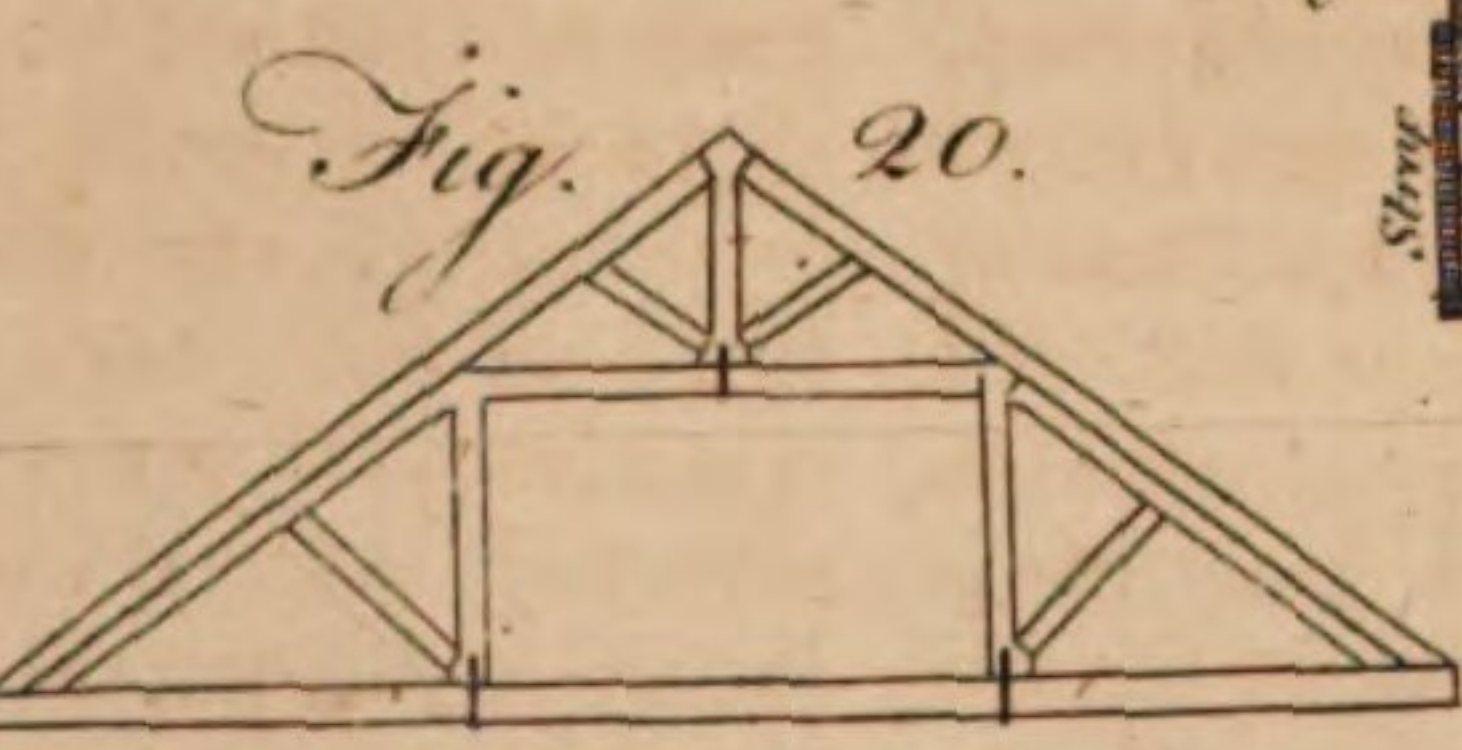
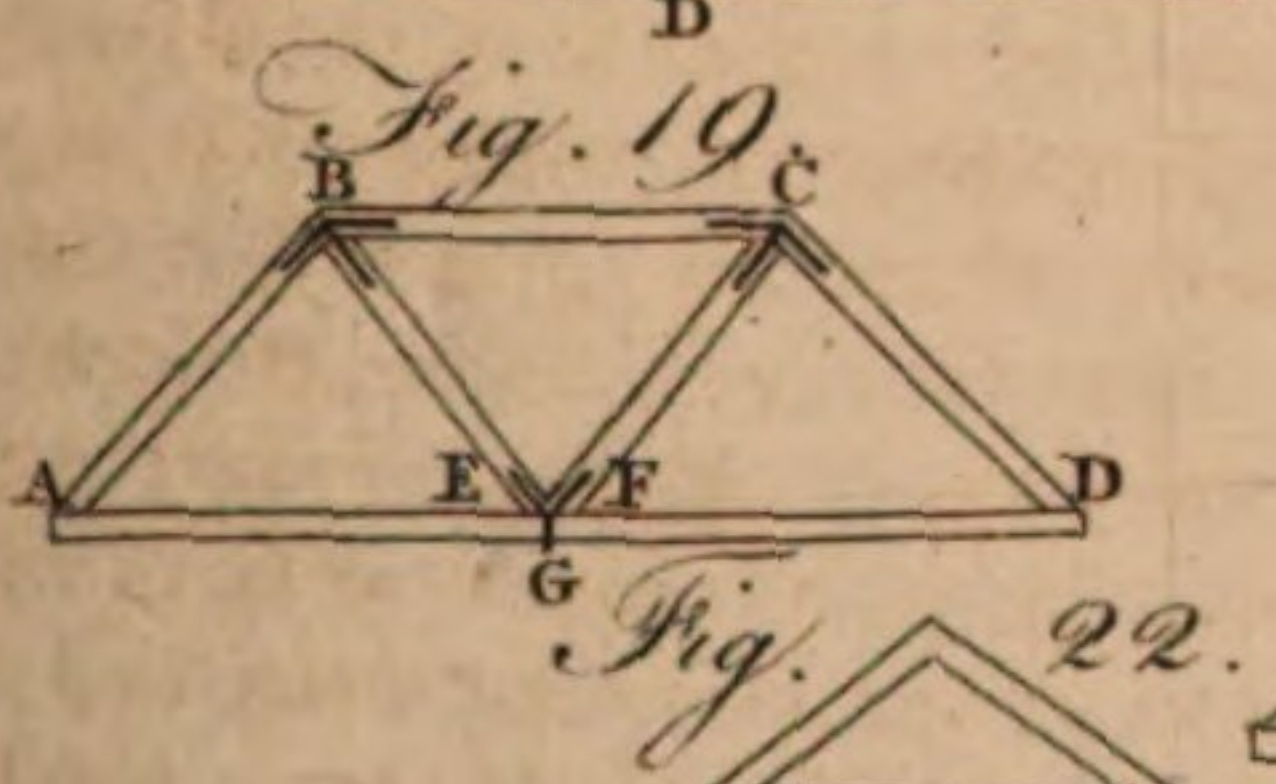
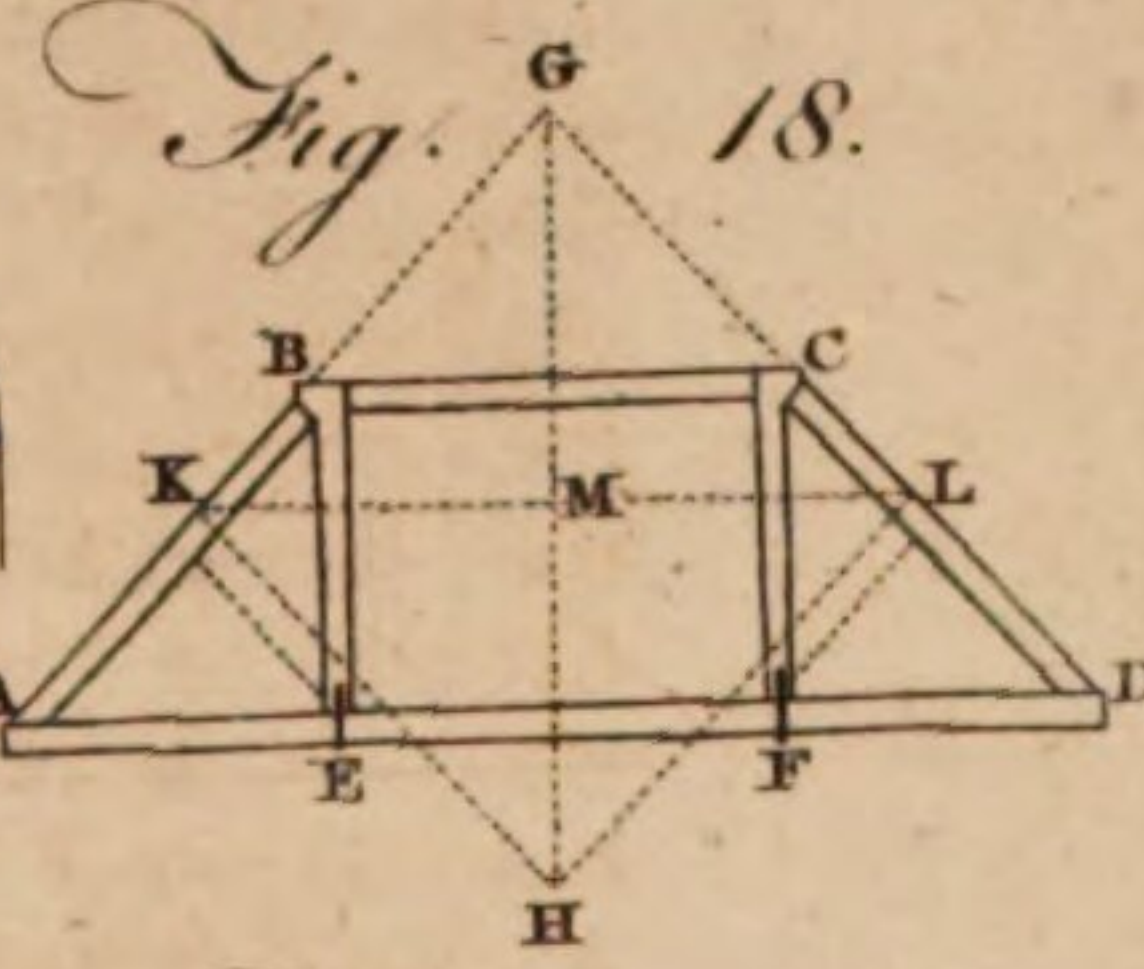
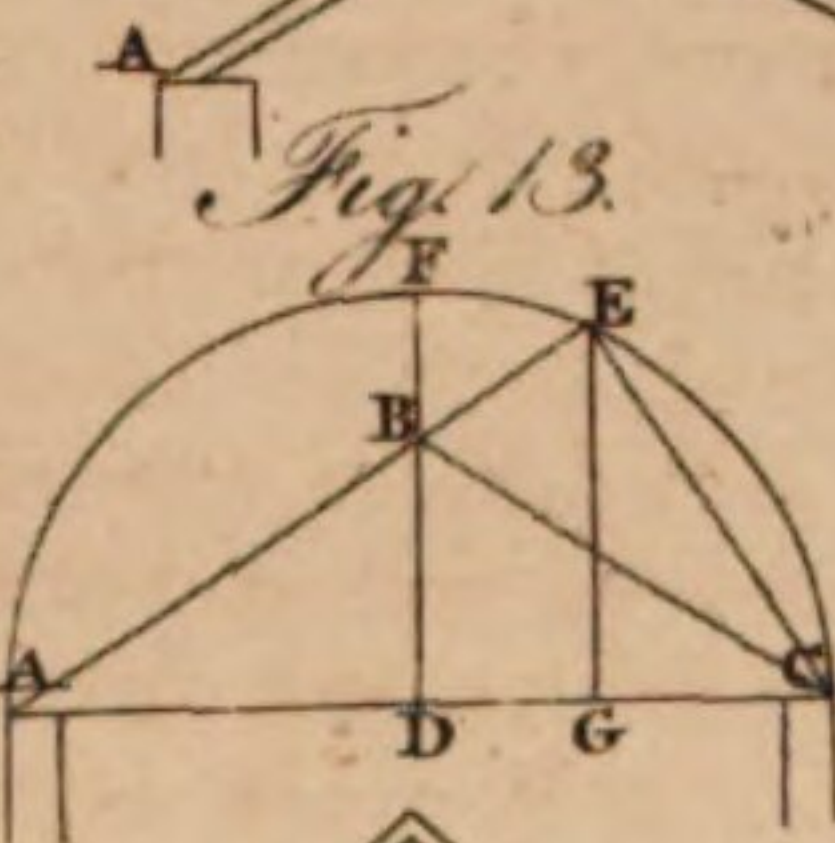
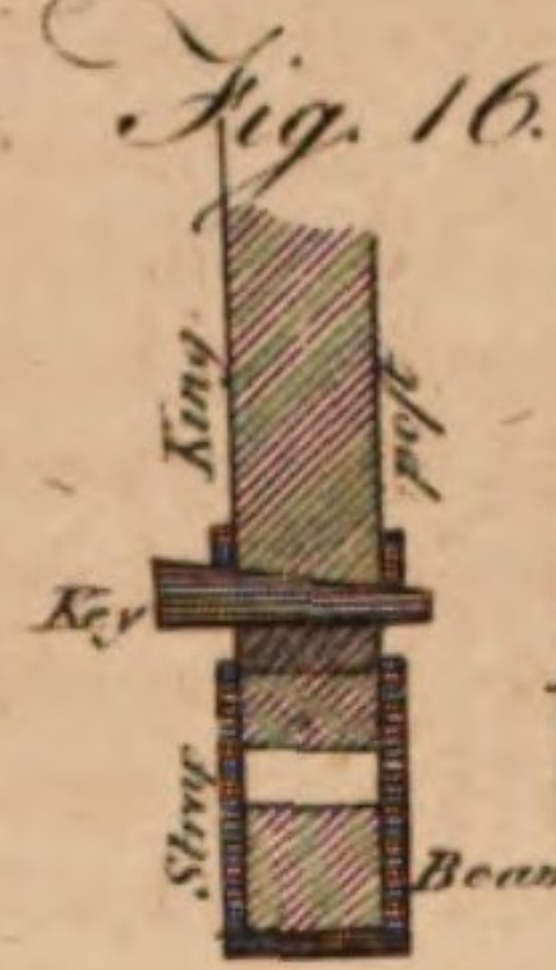
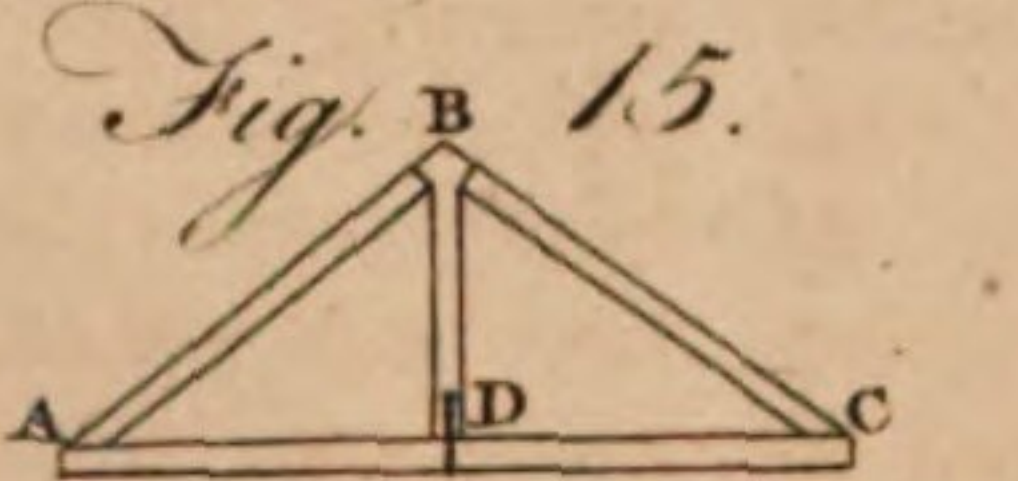
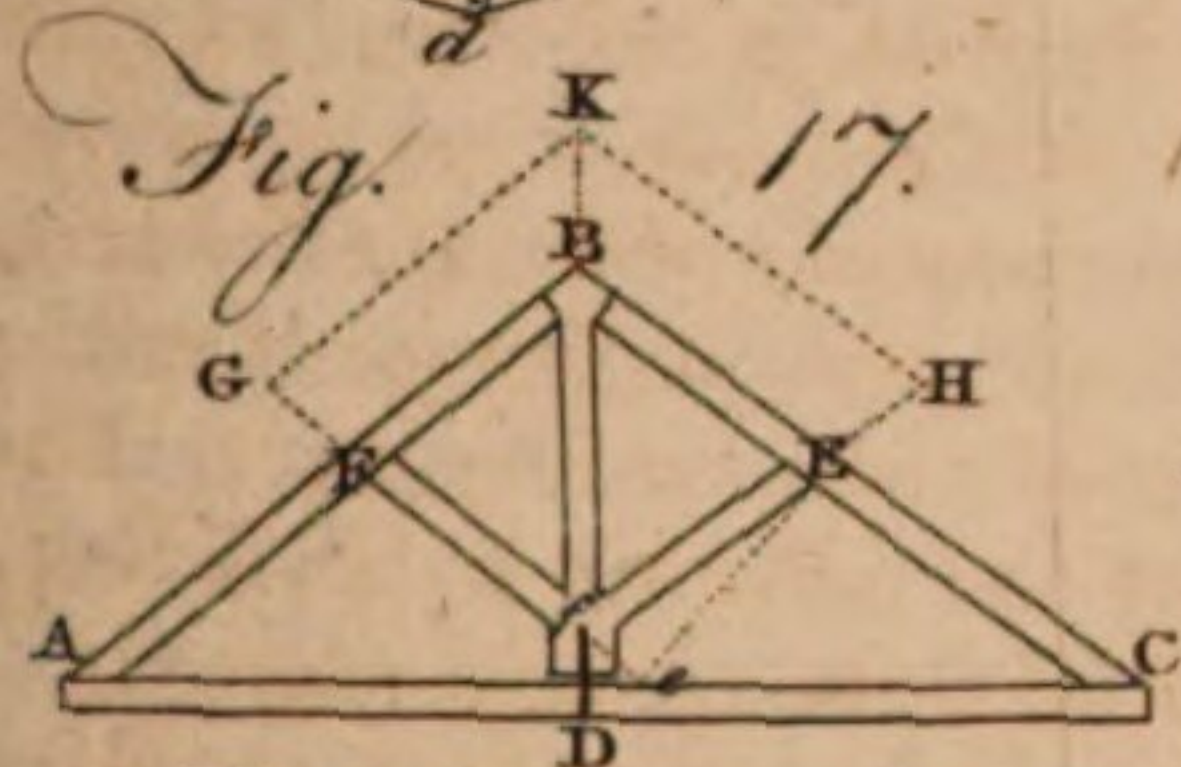
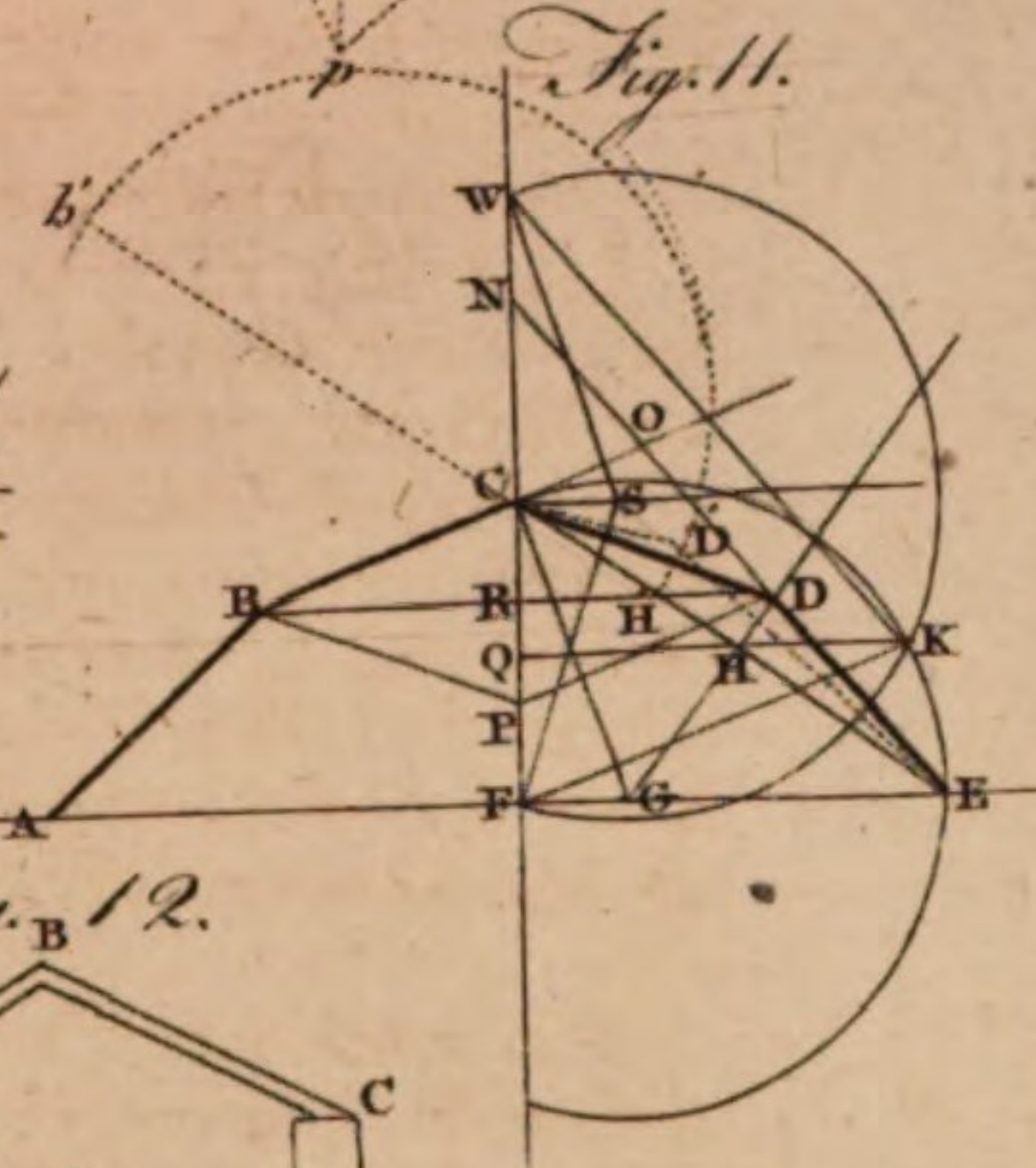
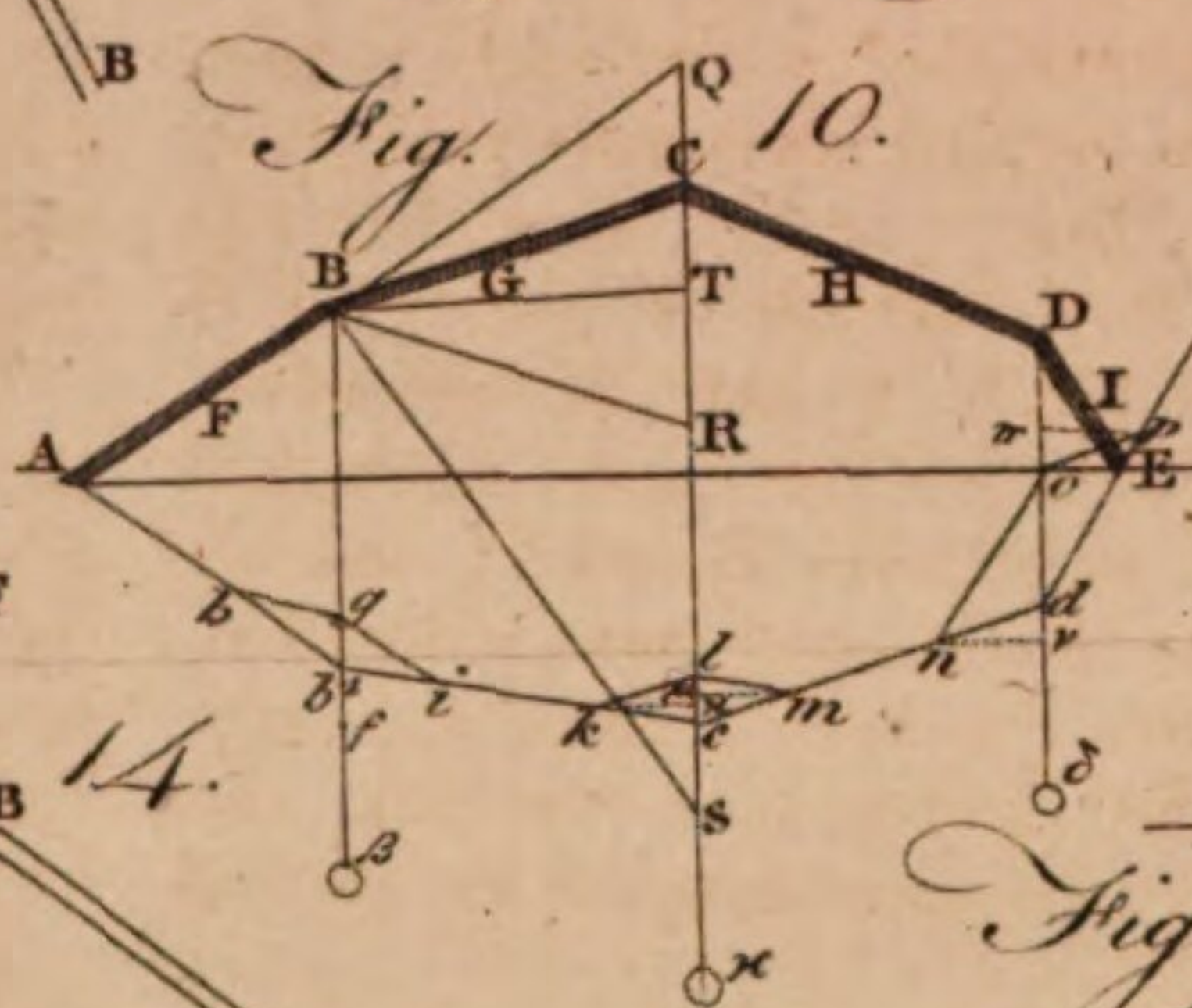
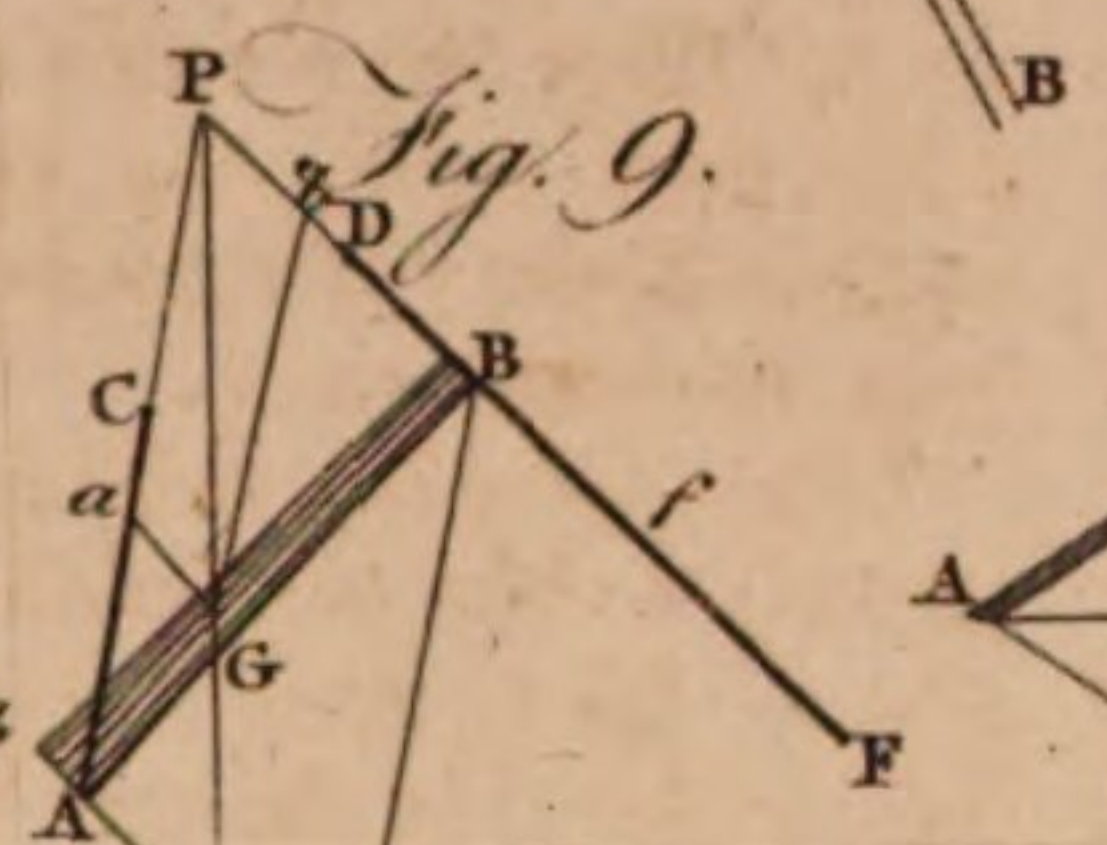
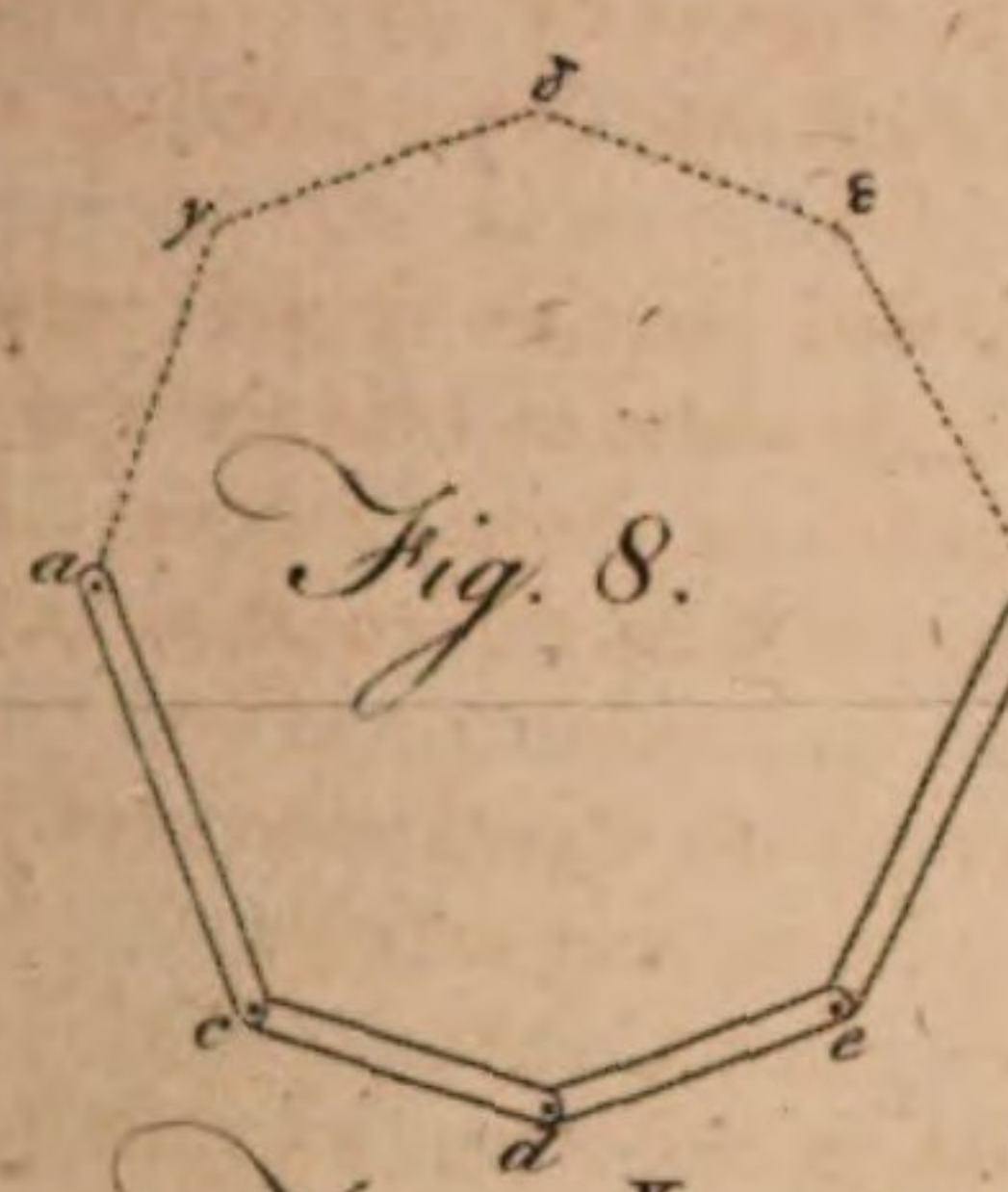
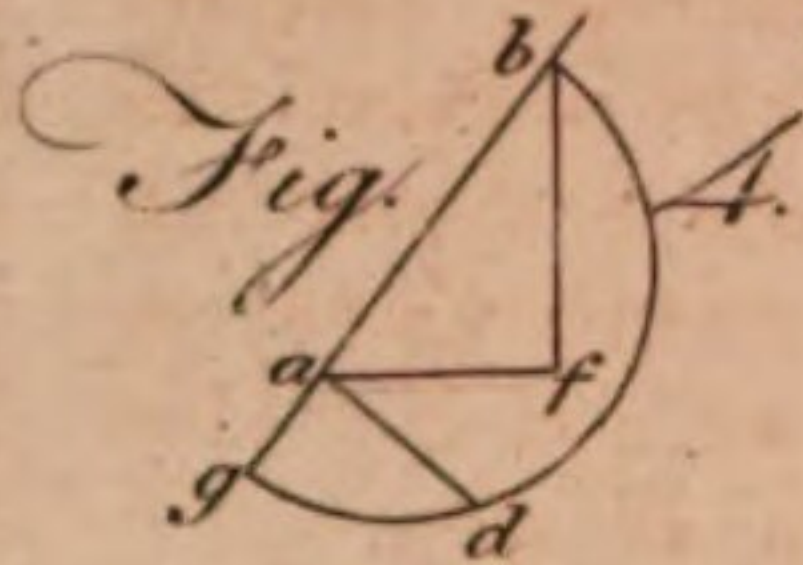
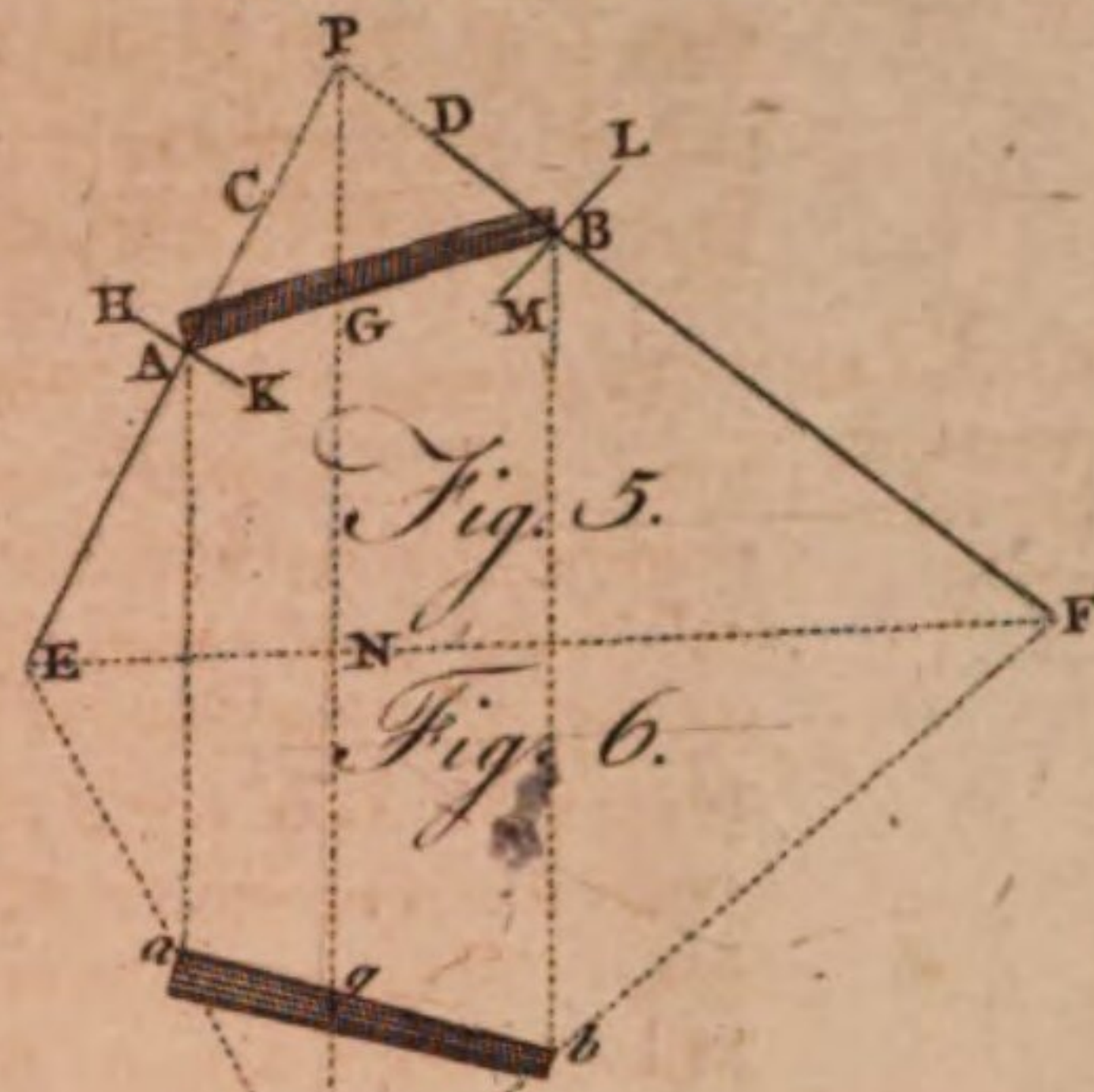
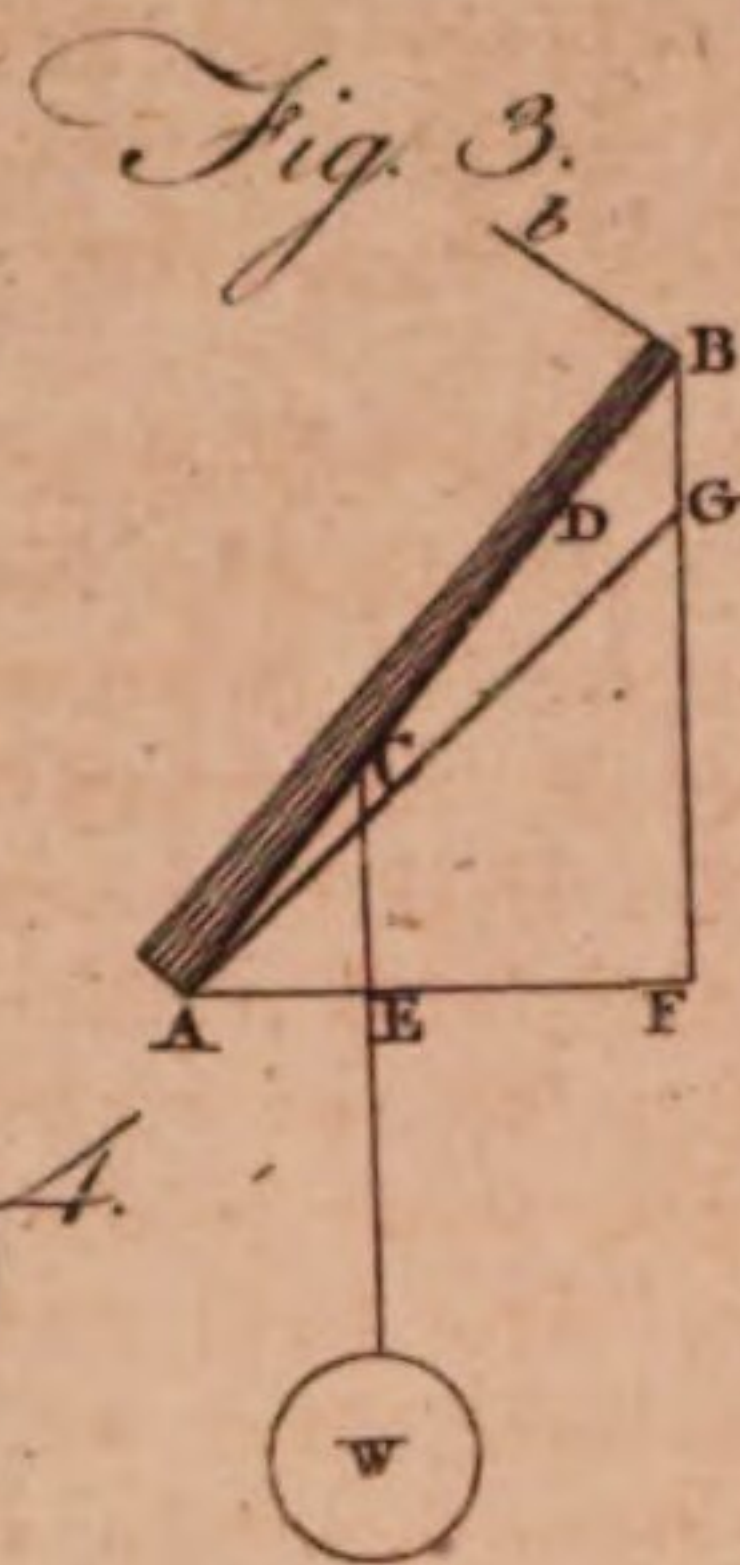
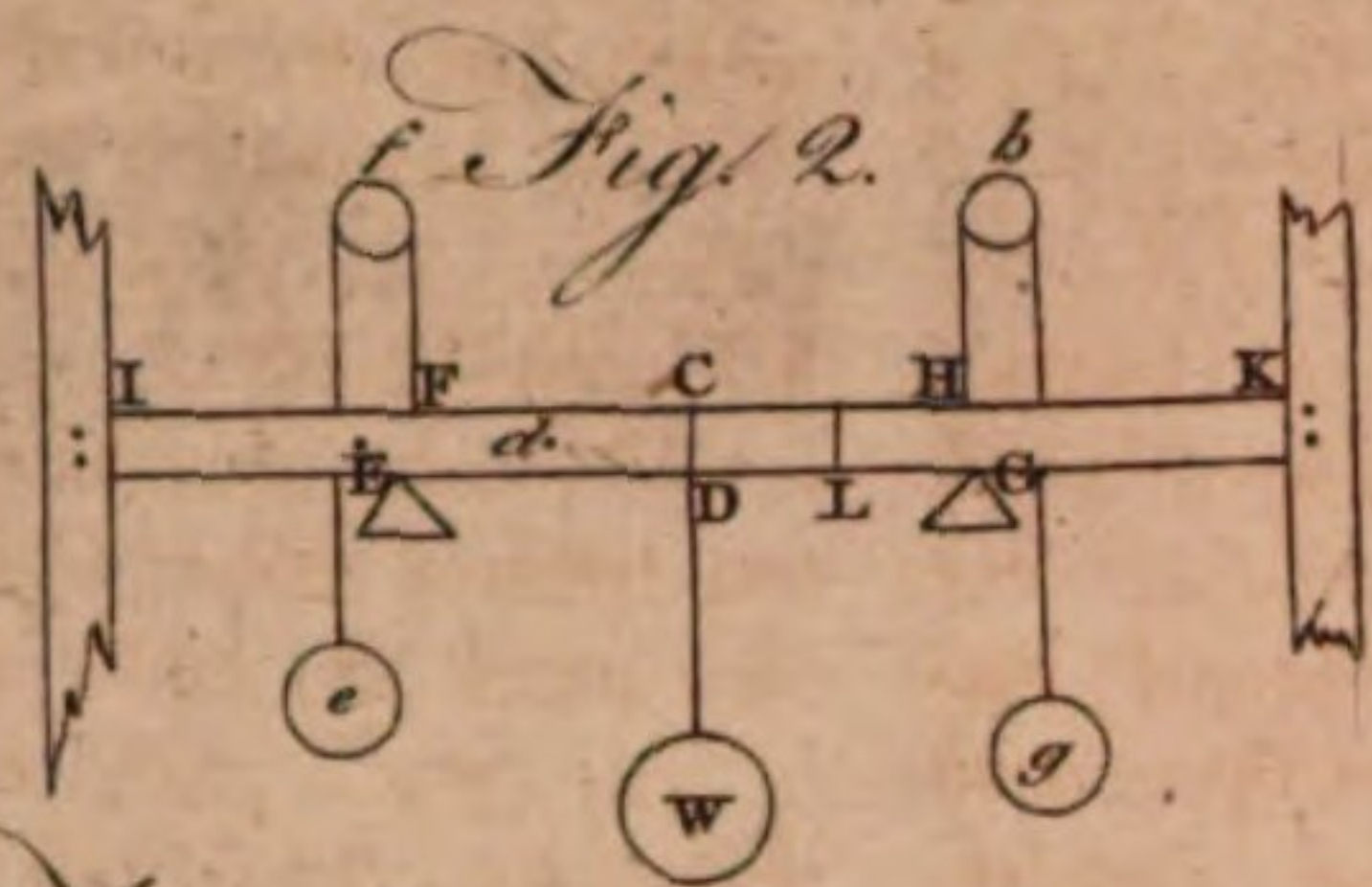
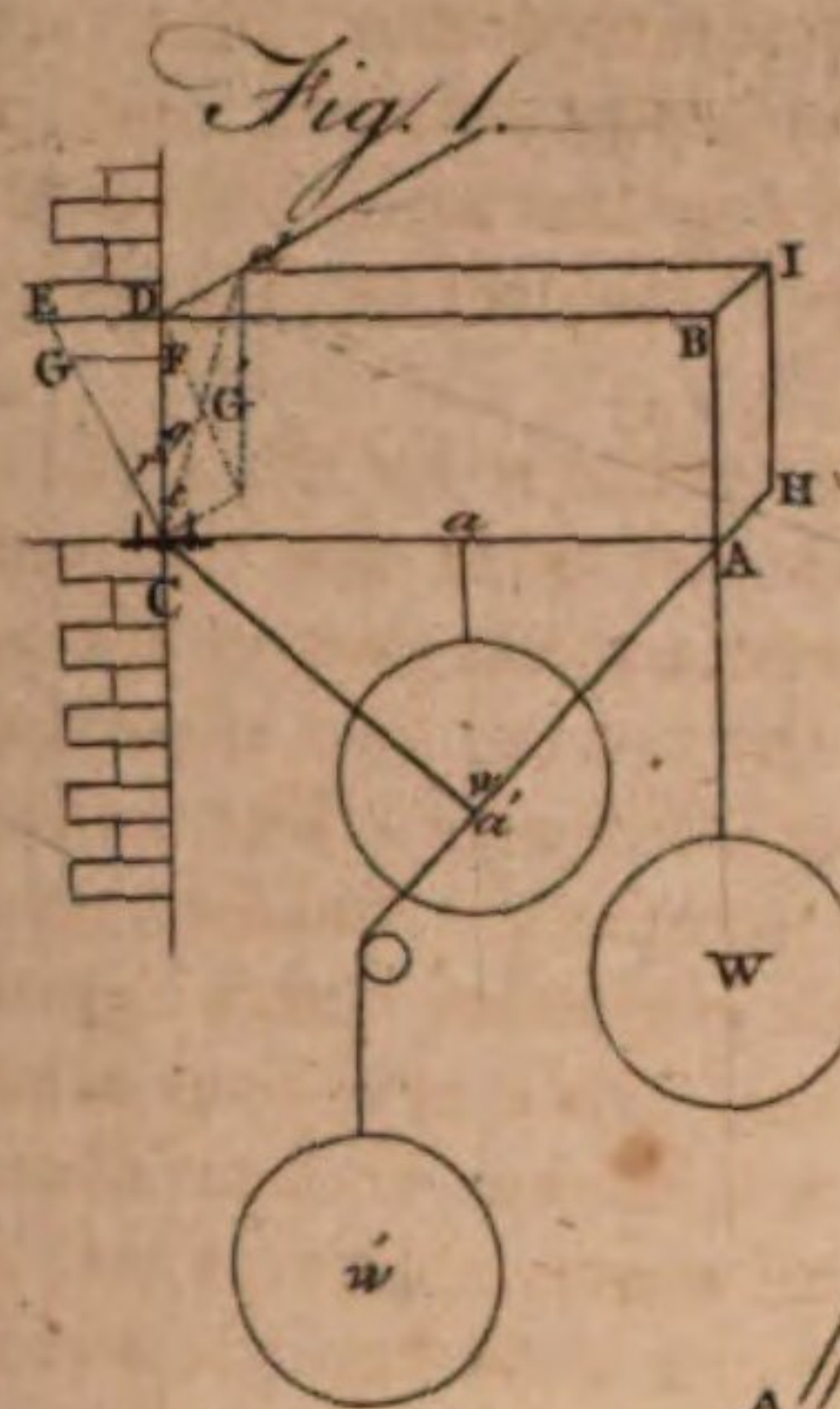
Roof
||
Rook.

50

Conclusion.

ROOFS.

Plate CCCCXL.



A. Ball, Print. Wm. & Scapton fecit.

Rooke. while the person who has it is present; but as soon as he is gone, they will return with redoubled vigour to the field and tear up every thing before them.

The best remedy the farmer has is to watch well the time of the corn's being in the condition in which they feed upon it; and as this lasts only a few days, he should keep a boy in constant pay to watch the field from day-break till the dusk of the evening. Every time they settle upon the ground to fly over it, the boy is to holloa, and throw up a dead rook into the air: this will always make them rise; and by degrees they will be so tired of this constant disturbance, that they will seek out other places of preying, and will leave the ground even before the time of the corn's being unfit for them. The reason of their rising at the tossing up of their dead fellow-creature is, that they are a bird extremely apprehensive of danger, and they are always alarmed when one of their comrades rises. They take this for the rising of an out-bird, and all fly off at the signal.

ROOKE (Sir George), a gallant naval commander, born of an ancient and honourable family in Kent, in 1650. His merit raised him by regular steps to be vice-admiral of the blue: in which station he served in the battle of La Hogue, on the 22d of May 1692; when it was owing to his vigorous behaviour, that the last stroke was given on that important day, which threw the French entirely into confusion. But the next day he obtained still more glory; for he had orders to go into La Hogue, and burn the enemy's ships as they lay there. There were 13 large men of war, which had crowded as far up as possible; and the transports, tenders, and ammunition ships, were disposed in such a manner that it was thought impossible to burn them. Besides, the French camp was in sight, with all the French and Irish troops that were to have been employed in the invasion of England; and several batteries were raised on the coast, well provided with heavy artillery. The vice-admiral made the necessary preparations for obeying his orders, but found it impossible to carry in the ships of his squadron: he therefore ordered his light frigates to ply in close to the shore; and having manned out all his boats, went himself to give directions for the attack, burnt that very night six three-deck-ships, and the next day six more, from 76 to 60 guns, together with most of the transports and ammunition vessels; and this under the fire of all the batteries just mentioned, and in sight of all the French and Irish troops: yet this bold action cost the lives of no more than ten men. The vice-admiral's behaviour on this occasion appeared so great to King William, that having no opportunity at that time of promoting him, he settled a pension of 1000*l.* per annum on him for life; and afterwards going to Portsmouth to view the fleet, went on board Mr Rooke's ship, dined with him, and then conferred on him the honour of knighthood, he having a little before made him vice-admiral of the red.

In consequence of other services he was in 1694 raised to the rank of admiral of the blue: towards the close of the next year, he was admiral of the white; and was also appointed admiral and commander in chief in the Mediterranean.

During King William's reign, Sir George was twice elected member for Portsmouth; and upon the acces-

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sion of Queen Anne in 1702, he was constituted vice-admiral and lieutenant of the admiralty of England, as also lieutenant of the fleets and seas of this kingdom. Upon the declaration of war against France, he was ordered to command a fleet sent against Cadiz, the duke of Ormond having the command of the land forces. On his passage home, receiving an account that the galleons, under the escort of a strong French squadron, were got into the harbour of Vigo, he resolved to attack them; and on the 11th of October came before the harbour of Rondondello, where the French commander had neglected nothing necessary for putting the place into the best posture of defence. But notwithstanding this, a detachment of 15 English and 10 Dutch men of war, of the line of battle, with all the fire-ships, were ordered in; the frigates and bomb-vessels followed; the great ships moved after them, and the army landed near Rondondello. The whole service was performed under Sir George's directions, with admirable conduct and bravery; for, in short, all the ships were destroyed or taken, prodigious damage done to the enemy, and vast wealth acquired by the allies. For this action Sir George received the thanks of the House of Commons, a day of thanksgiving was appointed both by the queen and the states-general, and Sir George was promoted to a seat in the privy-council; yet, notwithstanding this, the House of Lords resolved to inquire into his conduct at Cadiz. But he so fully justified himself, that a vote was passed, approving his behaviour.

In the spring of the year 1704, Sir George commanded the ships of war which convoyed King Cha. III. of Spain to Lisbon. In July, he attacked Gibraltar; when, by the bravery of the English seamen, the place was taken on the 24th, though the town was extremely strong, well furnished with ammunition, and had 100 guns mounted, all facing the sea and the narrow passes to the land: An action which was conceived and executed in less than a week; though it has since endured sieges of many months continuance, and more than once baffled the united forces of France and Spain. This brave officer being at last obliged, by the prevalence of party-spirit, to quit the service of his country, retired to his seat in Kent; where he spent the remainder of his days as a private gentleman.

He was thrice married; and by his second lady Mrs Luttrell left one son. He died January 24. 1708-9, in his 58th year, and was buried in Canterbury cathedral, where a monument is erected to his memory. In his private life he was a good husband and a kind master, lived hospitably towards his neighbours, and left behind him a moderate fortune; so moderate, that when he came to make his will, it surprised those who were present: but Sir George assigned the reason in a few words, "I do not leave much (said he), but what I leave was honestly gotten; it never cost a sailor a tear, or the nation a farthing."

ROOM, a chamber, parlour, or other apartment in a house. See **ARCHITECTURE** and **VENTILATION**.

ROOT, among botanists, denotes that part of a plant which imbibes the nutritious juices of the earth, and transmits them to the other parts. See **PLANT** and **RADIX**.

Colours extracted from Roots. See **COLOUR-Making**, n° 41.

Root,
Rope-
making.

ROOT, in algebra and arithmetic, denotes any number which, multiplied by itself once or oftener, produces any other number; and is called the *square*, *cube*, *biquadrate*, &c. *root*, according to number of multiplications. Thus, 2 is the square-root of 4; the cube-root of 8; the biquadrate-root of 16, &c.

ROPE, is a word too familiar to need a definition; and we need say no more than that it is only applied to a considerable collection of twisted fibres. Smaller bands are called lines, strings, cords; and it is not applied with great propriety even to those, unless they are composed of smaller things of the same kind twisted together. Two hay bands twisted together would be called a *rope*. All the different kinds of this manufacture, from a fishing-line or whip-cord to the cable of a first rate ship of war, go by the general name of CORDAGE.

Ropes are made of every substance that is sufficiently fibrous, flexible, and tenacious, but chiefly of the barks of plants. The Chinese and other orientals even make them of the ligneous parts of several plants, such as certain bamboos and reeds, the stems of the aloes, the fibrous covering of the cocoa nut, the filaments of the cotton pod, and the leaves of some grasses, such as the sparte (*Lygeum*, Linn.) The aloe (*Agave*, Linn.) and the sparte exceed all others in strength. But the barks of plants are the most productive of fibrous matter fit for this manufacture. Those of the Linden tree (*Teloa*), of the willow, the bramble, the nettle, are frequently used: but hemp and flax are of all others the best; and of these the hemp is preferred, and employed in all cordage exceeding the size of a line, and even in many of this denomination.

Hemp is very various in its useful qualities. These are great strength, and the length and fineness of the fibre. Being a plant of very greedy growth, it sucks up much of the unaltered juices of the soil, and therefore differs greatly according to its soil, climate, and culture. The best in Europe comes to us through Riga, to which port it is brought from very distant places to the southward. It is known by the name of *Riga rein* (that is, clean) hemp. Its fibre is not the longest (at least in the dressed state in which we get it) of all others, but it is the finest, most flexible, and strongest. The next to this is supposed to be the Petersburg braak hemp. Other hems are esteemed nearly in the following order:—Riga outshot, Petersburg outshot, hemp from Koningburgh, Archangel, Sweden, Memel. *Chucking* is a name given to a hemp that comes from various places, long in the fibre, but coarse and harsh, and its strength is inferior to hems which one would think weaker. Its texture is such, that it does not admit splitting with the hatchet so as to be more completely dressed. It is therefore kept in its coarse form, and used for inferior cordage. It is however a good and strong hemp, but will not make fine work. There are doubtless many good hems in the southern parts of Europe, but little of them is brought to our market. Codilla, half clean, &c. are portions of the above-mentioned hems, separated by the dressing, and may be considered as broken fibres of those hems.

Only the first qualities are manufactured for the rigging of the royal navy and for the ships of the East India company.

ROPE-MAKING is an art of very great importance; and there are few that better deserve the attention of the intelligent observer. Hardly any art can be carried on without the assistance of the rope-maker. Cordage makes the very sinews and muscles of a ship; and every improvement which can be made in its preparation, either in respect to strength or pliability, must be of immense service to the mariner, and to the commerce and the defence of nations.

We shall give a very short account of the manufacture, which will not indeed fully instruct the artificers, but will give such a view of the process as shall enable the reader to judge, from principle, of the propriety of the different parts of the manipulation, and perceive its defects, and the means for removing them.

The aim of the rope-maker is to unite the strength of a great number of fibres. This would be done in the completest manner by laying the fibres parallel to each other, and fastening the bundle at the two ends: but this would be of very limited use, because the fibres are short, not exceeding three feet and a half at an average. They must therefore be entangled together, in such a manner that the strength of a fibre shall not be able to draw it out from among the rest of the bundle. This is done by twisting or twining them together, which causes them mutually to compress each other. When the fibres are so disposed in a long skain, that their ends succeed each other along its length, without many of them meeting in one place, and this skain is twisted round and round, we may cause them to compress each other to any degree we please, and the friction on a fibre which we attempt to pull out may be more than its cohesion can overcome. It will therefore break. Consequently, if we pull at this twisted skain, we will not separate it by drawing one parcel out from among the rest, but the whole fibres will break; and if the distribution of the fibres has been very equable, the skain will be nearly of the same strength in every part. If there is any part where many ends of fibres meet, the skain will break in that part.

We know very well that we can twist a skain of fibres so very hard, that it will break with any attempt to twist it harder. In this state all the fibres are already strained to the utmost of their strength. Such a skain of fibres can have no strength. It cannot carry a weight, because each fibre is already strained in the same manner as if loaded with as much weight as it is able to bear. What we have said of this extreme case is true in a certain extent of every degree of twist that we give the fibres. Whatever force is actually exerted by a twisted fibre, in order that it may sufficiently compress the rest to hinder them from being drawn out, must be considered as a weight hanging on that fibre, and must be deduced from its absolute strength of cohesion, before we can estimate the strength of the skain. The strength of the skain is the remainder of the absolute strength of the fibres, after we have deduced the force employed in twisting them together.

From this observation may be deduced a fundamental principle in rope-making, that all twisting, beyond what is necessary for preventing the fibres from being drawn out without breaking, diminishes the strength of the cordage, and should be avoided when in our power. It is of importance to keep this in mind.

It

Rope-making.

5
Method to be observed in twisting the fibres.

It is necessary then to twist the fibres of hemp together, in order to make a rope; but we should make a very bad rope if we contented ourselves with twisting together a bunch of hemp sufficiently large to withstand the strains to which the rope is to be exposed. As soon as we let it go out of our hands, it would untwist itself, and be again a loose bundle of hemp; for the fibres are strained, and they are in a considerable degree elastic; they contract again, and thus untwist the rope or skain. It is necessary to contrive the twist in such a manner, that the tendency to untwist in one part may act against the same tendency in another and balance it. The process, therefore, of rope-making is more complicated.

6
Spinning of rope-yarns.

The first part of this process is **SPINNING OF ROPE-YARNS**. This is done in various ways, and with different machinery, according to the nature of the intended cordage. We shall confine our description to the manufacture of the larger kinds, such as are used for the standing and running rigging of ships.

7
Description of the apparatus and manner of using it.

Plate CCCCXL

An alley or walk is inclosed for the purpose, about 200 fathoms long, and of a breadth suited to the extent of the manufacture. It is sometimes covered above. At the upper end of this **ROPE-WALK** is set up the spinning-wheel, of a form resembling that in fig. 1. The band of this wheel goes over several rollers called **WHIRLS**, turning on pivots in brass holes. The pivots at one end come through the frame, and terminate in little hooks. The wheel being turned by a winch, gives motion in one direction to all those whirls. The spinner has a bundle of dressed hemp round his waist, with the two ends meeting before him. The hemp is laid in this bundle in the same way that women spread the flax on the distaff. There is great variety in this; but the general aim is to lay the fibres in such a manner, that as long as the bundle lasts there may be an equal number of the ends at the extremity, and that a fibre may never offer itself double or in a bight. The spinner draws out a proper number of fibres, twists them with his fingers, and having got a sufficient length detached, he fixes it to the hook of a whirl. The wheel is now turned, and the skain is twisted, becoming what is called a **ROPE-YARN**, and the spinner walks backwards down the rope-walk. The part already twisted draws along with it more fibres out of the bundle. The spinner aids this with his fingers, supplying hemp in due proportion as he walks away from the wheel, and taking care that the fibres come in equally from both sides of his bundle, and that they enter always with their ends, and not by the middle, which would double them. He should also endeavour to enter every fibre at the heart of the yarn. This will cause all the fibres to mix equally in making it up, and will make the work smooth, because one end of each fibre is by this means buried among the rest, and the other end only lies outward; and this, in passing through the grasp of the spinner, who presses it tight with his thumb and palm, is also made to lie smooth. The greatest fault that can be committed in spinning is to allow a small thread to be twisted off from one side of the hemp, and then to cover this with hemp supplied from the other side: for it is evident that the fibres of the central thread make very long spirals, and the skin of fibres which covers them must be much more oblique. This covering has but little connection with what is

below it, and will easily be detached. But even while it remains, the yarn cannot be strong; for on pulling it, the middle part, which lies the straightest, must bear all the strain, while the outer fibres, that are lying obliquely, are only drawn a little more parallel to the axis. This defect will always happen if the hemp be supplied in a considerable body to a yarn that is then spinning small. Into whatever part of the yarn it is made to enter, it becomes a sort of loosely connected wrapper. Such a yarn, when untwisted a little, will have the appearance of fig. 2. while a good yarn looks like fig. 3. A good spinner therefore endeavours always to supply the hemp in the form of a thin flat skain with his left hand, while his right is employed in grasping firmly the yarn that is twining off, and in holding it tight from the whirl, that it may not run into loops or kinks.

It is evident, that both the arrangement of the fibres and the degree of twisting depend on the skill and dexterity of the spinner, and that he must be instructed, not by a book, but by a master. The degree of twist depends on the rate of the wheel's motion, combined with the retrograde walk of the spinner.

We may suppose him arrived at the lower end of the walk, or as far as is necessary for the intended length of his yarn. He calls out, and another spinner immediately detaches the yarn from the hook of the whirl, gives it to another, who carries it aside to the reel, and this second spinner attaches his own hemp to the whirl hook. In the mean time, the first spinner keeps fast hold of the end of his yarn; for the hemp, being dry, is very elastic, and if he were to let it go out of his hand it would instantly untwist, and become little better than loose hemp. He waits, therefore, till he sees the reeler begin to turn the reel, and he goes slowly up the walk, keeping the yarn of an equal tightness all the way, till he arrives at the wheel, where he waits with his yarn in hand till another spinner has finished his yarn. The first spinner takes it off the whirl hook, joins it to his own, that it may follow it on the reel, and begins a new yarn.

8
Rope-yarns, for the greatest part of the large rigging, are from a quarter of an inch to somewhat more than a third of an inch in circumference, or of such a size that 160 fathoms weigh from 3½ to 4 pounds when white. The different sizes of yarns are named from the number of them contained in a strand of a rope of three inches in circumference. Few are so coarse that 16 will make a strand of British cordage; 18 is not uncommon for cable yarns, or yarns spun from harsh and coarse hemp; 25 is, we believe, the finest size which is worked up for the rigging of a ship. Much finer are indeed spun for sounding lines, fishing lines, and many other marine uses, and for the other demands of society. Ten good spinners will work up above 600 weight of hemp in a day; but this depends on the weather. In very dry weather the hemp is very elastic, and requires great attention to make smooth work. In the warmer climates, the spinner is permitted to moisten the rag with which he grasps the yarn in his right hand for each yarn. No work can be done in an open spinning walk in rainy weather, because the yarns would not take on the tar, if immediately tarred, and would rot if kept on the reel for a long time.

The second part of the process is the conversion of the

Rope-making.

Rope-making.

9
Method of
converting
the rope-
yarns into
ropes,
cords, or
lines.

the yarns into what may with propriety be called a rope, cord, or line. That we may have a clear conception of the principle which regulates this part of the process, we shall begin with the simplest possible case, the union of two yarns into one line. This is not a very usual fabric for rigging, but we select it for its simplicity.

When hemp has been split into very fine fibres by the hatchet, it becomes exceedingly soft and pliant, and after it has lain for some time in the form of fine yarn, it may be unreel and thrown loose, without losing much of its twist. Two such yarns may be put on the whirl of a spinning wheel, and thrown, like flaxen yarn, so as to make sewing thread. It is in this way, indeed, that the sailmaker's sewing thread is manufactured; and when it has been kept on the reel, or on balls or bobbins, for some time, it retains its twist as well as its uses require. But this is by no means the case with yarns spun for great cordage. The hemp is so elastic, the number of fibres twisted together is so great, and the diameter of the yarn (which is a sort of lever on which the elasticity of the fibre exerts itself) is so considerable, that no keeping will make the fibres retain this constrained position. The end of a rope-yarn being thrown loose, it will immediately untwist, and this with considerable force and speed. It would, therefore, be a fruitless attempt to twist two such yarns together; yet the ingenuity of man has contrived to make use of this very tendency to untwist not only to counteract itself, but even to produce another and a permanent twist, which requires force to undo it, and which will recover itself when this force is removed. Every person must recollect that, when he has twisted a packthread very hard with his fingers between his two hands, if he slackens the thread by bringing his hands nearer together, the packthread will immediately curl up, running into loops or kinks, and will even twist itself into a neat and firm cord. Familiar as this fact is, it would puzzle any person not accustomed to these subjects to explain it with distinctness. We shall consider it with some care, not as a piece of mechanical curiosity, but as a fundamental principle in this manufacture, which will give us clear instructions to direct us in the most delicate part of the whole process. And we beg the attention of the artists themselves to a thing which they seem to have overlooked.

Let md , nd (fig. 4.) be two yarns fixed to one point d , and let both of them be twisted, each round its own axis, in the direction abc , which will cause the fibres to lie in a screw form, as represented in the figure. If the end d of the yarn md were at liberty to turn round the point d , it would turn accordingly, as often as the end m is turned round, and the yarn would acquire no twist; but being attached to some solid body it cannot turn without turning this body. It has, however, this tendency, and the body must be forcibly prevented from turning. If it be held fast for a time, and then let go, it will be turned round, and it will not stop till it has turned as often as the end m has been twisted, and now all the twist will be undone. Thus it is the tendency of the yarn md to untwist at the end d (because it is kept fast at m), which produces this motion of the body attached to it at d . What we have said of the yarn md is equally true of the yarn nd . Both tend to turn, and will turn, the body attached at d round the common axis, in the same direc-

tion in which they are twisted. Let fig. 5. be supposed a cross section of the two yarns touching each other at d , and there glued to a board. The fibres of each pull obliquely, that is, they both pull away from the board, and pull laterally. The direction of this lateral pull of the fibres in the circumference of each yarn is represented by the little darts drawn round the circumferences. These actions directly oppose and balance each other at d ; but in the semicircles oet , tfo , they evidently conspire to turn the board round in the same direction. The same may be said of the outer halves of any circles described within these. In the inner halves of these inner circles the actions of some fibres oppose each other; but in every circle there are many more conspiring actions than opposing ones, and the conspiring actions exert themselves by longer levers, so that their joint momentum greatly exceeds that of the opposing forces. It may be demonstrated, that if all the fibres exert equal forces, the force which tends to turn the board round the common axis is $\frac{2}{3}$ of the force employed to twist both the yarns.

Suppose then that the solid body to which the yarns are attached is at liberty to turn round the common axis; it cannot do this without carrying the yarns round with it. They must, therefore, turn round each other, and thus compose a rope or cord kl , having its component yarns (now called *strands*) lying in a direction opposite to that of the fibres in each strand. The rope will take this twist, while each of the strands is really untwisting, and the motion will not stop till all is again in equilibrio. If the yarns had no diameter and no rigidity, their elastic contraction would not be balanced till the cord had made half the number of turns which had been given to that part of the yarn which is thus doubled up. But, as the yarns have a sensible diameter, the same ultimate contraction of the fibres will be expended by the twisting of the cord in fewer turns, even if the yarns had no rigidity. The turns necessary for this purpose will be so much fewer, in proportion to the twist of the yarns, as the fibres of the yarn lie more obliquely, that is, as the yarns are more twisted. But further, this contractile force has to overcome the rigidity or stiffness of the yarns. This requires force merely to *bend* it into the screw form; and therefore, when all is again at rest, the fibres are in a state of strain, and the rope is not so much closed by doubling as it would have been had the yarns been softer. If any thing can be done to it in this state which will soften the yarns, it will twist itself more up. It has therefore a *tendency* to twist more up; and if this be aided by an external force which will bend the strands, this will happen. Beating it with a soft mallet will have this effect; or, if it be forcibly twisted till the fibres are allowed to contract as much as they would have done had the yarn been perfectly soft, the cord will keep this twist without any effort; and this must be considered as its most perfect state, in relation to the degree of twist originally given to the yarns. It will have no tendency to run into kinks, which is both troublesome and dangerous, and the fibres will not be exerting any useless effort.

To attain this state should therefore be the aim of every part of this second process; and this principle should be kept in view through the whole of it.

The component parts of a rope are called strands, as

Rope-making.

Rope-making.

10
Description
of the ma-
chinery,
and mode
of using it.

has been already observed; and the operation of uniting them with a permanent twist is called *laying* or *closing*, the latter term being chiefly appropriated to cables and other very large cordage.

Lines and cordage less than $1\frac{1}{4}$ inches circumference are laid at the spinning-wheel. The workman fastens the ends of each of two or three yarns to separate whirl-hooks. The remote ends are united in a knot. This is put on one of the hooks of a swivel called the *loper*, represented in fig. 6. and care is taken that the yarns are of equal lengths and twist. A piece of soft cord is put on the other hook of the loper; and, being put over a pulley several feet from the ground, a weight is hung on it, which stretches the yarn. When the workman sees that they are equally stretched, he orders the wheel to be turned in the same direction as when twining the yarns. This would twine them harder; but the swivel of the loper gives way to the strain, and the yarns immediately twist around each other, and form a line or cord. In doing this the yarns lose their twist. This is restored by the wheel. But this simple operation would make a very bad line, which would be slack, and would not hold its twist; for, by the turning of the loper, the strands twist immediately together, to a great distance from the loper. By this turning of the loper the yarns are untwisted. The wheel restores their twist only to that part of the yarns that remains separate from the others, but cannot do it in that part where they are already twined round each other, because their mutual pressure prevents the twist from advancing. It is, therefore, necessary to retard this tendency to twine, by keeping the yarns apart. This is done by a little tool called the *top*, represented in fig. 7.

It is a truncated cone, having three or more notches along its sides, and a handle called the *staff*. This is put between the strands, the small end next the loper, and it is pressed gently into the angle formed by the yarns which lie in the notches. The wheel being now turned, the yarns are more twisted, or *hardened up*, and their pressure on the top gives it a strong tendency to come out of the angle, and also to turn round. The workman does not allow this till he thinks the yarns sufficiently hardened. Then he yields to the pressure, and the top comes away from the swivel, which immediately turns round, and the line begins to lay.— Gradually yielding to this pressure, the workman slowly comes up towards the wheel, and the laying goes on, till the top is at last close to the wheel, and the work is done. In the mean time, the yarns are shortened, both by the twining of each and the laying of the cord. The weight, therefore, gradually rises. The use of this weight is evidently to oblige the yarn to take a proper degree of twist, and not run into kinks.

A cord or line made in this way has always some tendency to twist a little more. However little friction there may be in the loper, there is some, so that the turns which the cord has made in the laying are not enough to balance completely the elasticity of the yarns; and the weight being appended causes the strands to be more nearly in the direction of the axis, in the same manner as it would stretch and untwist a little any rope to which it is hung. On the whole, however, the twist of a laid line is permanent, and not like that upon thread doubled or thrown in a mill, which remains only

in consequence of the great softness and flexibility of the yarn.

The process for laying or closing large cordage is considerably different from this. The strands of which the rope is composed consist of many yarns, and require a considerable degree of hardening. This cannot be done by a whirl driven by a wheel-band; it requires the power of a crank turned by the hand. The strands, when properly hardened, become very stiff, and when bent round the top are not able to transmit force enough for laying the heavy and unpliant rope which forms beyond it. The elastic twist of the hardened strands must, therefore, be assisted by an external force. All this requires a different machinery and a different process.

At the upper end of the walk is fixed up the *tackle-board*, fig. 8. This consists of a strong oaken plank called a *breast-board*, having three or more holes in it, such as A, B, C, fitted with brads or iron plates. Into these are put iron cranks, called *heavers*, which have hooks, or forelocks, and keys, on the ends of their spindles. They are placed at such a distance from each other, that the workmen do not interfere with each other while turning them round. This breast-board is fixed to the top of strong posts well secured by struts or braces facing the lower end of the walk. At the lower end is another breast-board fixed to the upright posts of a sledge, which may be loaded with stones or other weights. Similar cranks are placed in the holes of this breast-board. The whole goes by the name of the *sledge*; (see fig. 9.) The top necessary for closing large cordage is too heavy to be held in the hand. It therefore has a long staff, which has a truck on the end. This rests on the ground; but even this is not enough in laying great cables. The top must be supported on a carriage, as shown in fig. 10. where it must lie very steady, and need no attendance, because the master workman has sufficient employment in attending to the manner in which the strands close behind the top, and in helping them by various methods. The top is, therefore, fixed to the carriage by lashing its staff to the two upright posts. A piece of soft rope, or strap, is attached to the handle of the top by the middle, and its two ends are brought back and wrapped several times tight round the rope, in the direction of its twist, and bound down. This is shown at W, and it greatly assists the laying of the rope by its friction. This both keeps the top from flying too far from the point of union of the strands, and brings the strands more regularly into their places.

The first operation is *warping* the yarns. At each end of the walk are frames called *warping frames*, which carry a great number of reels or winches filled with rope-yarn. The foreman of the walk takes off a yarn end from each, till he has made up the number necessary for his rope or strand, and bringing the ends together, he passes the whole through an iron ring fixed to the top of a stake driven into the ground, and draws them through: then a knot is tied on the end of the bundle, and a workman pulls it through this ring till the intended length is drawn off the reels. The end is made fast at the bottom of the walk, or at the sledge, and the foreman comes back along the skain of yarns, to see that none are hanging slacker than the rest. He takes

Rope-making.

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Large or
hawser-
laid cor-
dage is
different-
ly formed.

12

Machinery
and mode
of using it
in this case.

Rope-making.

takes up in his hand such as are slack, and draws them tight, keeping them so till he reaches the upper end, where he cuts the yarns to a length, again adjusts their tightness, and joins them all together in a knot, to which he fixes the hook of a tackle, the other block of which is fixed to a firm post, called the *warping-post*. The flain is well stretched by this tackle, and then separated into its different strands. Each of these is knotted apart at both ends. The knots at their upper ends are made fast to the hooks of the cranks in the tackle-board, and those at their lower ends are fastened to the cranks in the sledge. The sledge itself is kept in its place by a tackle, by which the strands are again stretched in their places, and every thing adjusted, so that the sledge stands square on the walk, and then a proper weight is laid on it. The tackle is now cut off, and the cranks are turned at both ends, in the contrary direction to the twist of the yarns. (In some kinds of cordage the cranks are turned the same way with the spinning twist). By this the strands are twisted and hardened up; and as they contract by this operation, the sledge is dragged up the walk. When the foreman thinks the strands sufficiently hardened, which he estimates by the motion of the sledge, he orders the heavers at the cranks to stop. The middle strand at the sledge is taken off from the crank. This crank is taken out, and a stronger one put in its place at D, fig. 9. The other strands are taken off from their cranks, and all are joined on the hook which is now in the middle hole. The top is then placed between the strands, and, being pressed home to the point of their union, the carriage is placed under it, and it is firmly fixed down. Some weight is taken off the sledge. The heavers now begin to turn at both ends. Those at the tackle-board continue to turn as they did before; but the heavers at the sledge turn in the opposite direction to their former motion, so that the cranks at both ends are now turning one way. By the motion of the sledge crank the top is forced away from the knot, and the rope begins to close. The heaving at the upper end restores to the strand the twist which they are constantly losing by the laying of the rope. The workmen judge of this by making a chalk mark on intermediate points of the strands, where they lie on the stakes which are set up along the walk for their support. If the twist of the strands is diminished by the motion of closing, they will ling then, and the chalk mark will move away from the tackle-board: but if the twist increases by turning the cranks at the tackle-board, the strands will shorten, and the mark will come nearer to it.

As the closing of the rope advances, the whole shortens, and the sledge is dragged up the walk. The top moves faster, and at last reaches the upper end of the walk, the rope being now laid. In the mean time, the sledge has moved several fathoms from the place where it was when the laying began.

These motions of the sledge and top must be exactly adjusted to each other. The rope must be of a certain length. Therefore the sledge must stop at a certain place. At that moment the rope should be laid; that is, the top should be at the tackle board. In this consists the address of the foreman. He has his attention directed both ways. He looks at the strands, and when he sees any of them hanging slacker between the stakes than the others, he calls to the heavers at the tackle-

board to heave more upon that strand. He finds it more difficult to regulate the motion of the top. It requires a considerable force to keep it in the angle of the strands, and it is always disposed to start forward. To prevent or check this, some straps of soft rope are brought round the staff of the top, and then wrapped several times round the rope behind the top, and kept firmly down by a lanyard or bandage, as is shown in the figure. This both holds back the top and greatly assists the laying of the rope, causing the strands to fall into their places, and keep close to each other. This is sometimes very difficult, especially in ropes composed of more than three strands. It will greatly improve the laying the rope, if the top have a sharp, smooth, tapering pin of hard wood, pointed at the end, projecting so far from the middle of its smaller end, that it gets in between the strands which are closing. This supports them, and makes their closing more gradual and regular. The top, its notches, the pin, and the warp or strap, which is lapped round the rope, are all smeared with grease or soap to assist the closing. The foreman judges of the progress of closing chiefly by his acquaintance with the walk, knowing that when the sledge is abreast of a certain stake the top should be abreast of a certain other stake. When he finds the top too far down the walk, he slackens the motion at the tackle-board, and makes the men turn briskly at the sledge. By this the top is forced up the walk, and the laying of the rope accelerates, while the sledge remains in the same place, because the strands are losing their twist, and are lengthening, while the closed rope is shortening. When, on the other hand, he thinks the top too far advanced, and fears that it will be at the head of the walk before the sledge has got to its proper place, he makes the men heave briskly on the strands, and the heavers at the sledge crank to work softly.— This quickens the motion of the sledge by shortening the strands; and by thus compensating what has been overdone, the sledge and top come to their places at once, and the work appears to answer the intention.

But this is a bad manner of proceeding. It is evident, that if the strands be kept to one degree of hardness throughout, and the heaving at the sledge be uniformly continued, the rope will be uniform. It may be a little longer or shorter than was intended, and the laying may be too hard in proportion to the twist of the strands, in which case it will not keep it; or it may be too slack, and the rope will tend to twist more. Either of these faults are discoverable by slackening the rope before it come off the hooks, and it may then be corrected. But if the error in one place be compensated by that in another, this will not be easily seen before taking off the hooks; and if it is a large and stiff rope, it will hardly ever come to an equable state in its different parts, but will be apt to run into loops during service.

It is, therefore, of importance to preserve the uniformity throughout the whole. Mr Du Hamel, in his great work on rope-making, proposes a method which is very exact, but requires an apparatus which is cumbersome, and which would be much in the way of the workmen. We think that the following method would be extremely easy, embarrass no one, and is perfectly exact. Having determined the proportion between the velocity of the top and sledge, let the diameter of the

Rope-making.

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Some im-
proprieties
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process
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out, and

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Another
method
proposed,
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truck

Rope-making.

truck of the top carriage be to that of another truck fixed to the sledge, in the proportion of the velocity of the top to that of the sledge. Let a mark be made on the rim of each; let the man at the sledge make a signal every time that the mark on the sledge truck is uppermost. The mark on the carriage truck should be uppermost at the same instant; and in this way the foreman knows the state of the rope at all times without quitting his station. Thus, in making a cable of 120 fathoms, it is usual to warp the yarns 180 fathoms, and to harden them up to 140 before closing. Therefore, in the closing, the top must move 140 fathoms, and the sledge only 20. The diameter of the carriage truck should therefore be seven times the diameter of the sledge truck.

We have hitherto proceeded on the supposition, that the twist produced by the cranks is propagated freely along the strands and along the closing rope. But this is not the case. It is almost unavoidable that the twist is greater in the neighbourhood of the crank which produces it. The strands are frequently of very considerable weight, and lie heavy on the flakes. Force is therefore necessary to overcome their friction, and it is only the overplus that is propagated beyond the flake. It is proper to lift them up from time to time, and let them fall down again, as the sawer does with his marking line. This helps the twist to run along the strand. But this is not enough for the closed rope, which is of much greater weight, and much stiffer.—When the top approaches the tackle-board, the heaving at the sledge could not cause the strands immediately behind the top to close well, without having previously produced an extravagant degree of twist in the intermediate rope. The effort of the crank must therefore be assisted by men stationed along the rope, each furnished with a tool called a *woolder*. This is a stout oak stick about three feet long, having a strap of soft rope-yarn or cordage fastened on its middle or end. The strap is wrapped round the laid rope, and the workman works with the stick as a lever, twisting the rope round in the direction of the crank's motion. The woolders should keep their eye on the men at the crank, and make their motion correspond with his. Thus they send forward the twist produced by the crank, without either increasing or diminishing it, in that part of the rope which lies between them and the sledge.

It is usual before taking the rope from the hooks to leave a while at the sledge end, in order to harden the rope a little. They do this so as to take it up about $\frac{1}{10}$. The propriety or impropriety of this practice depends entirely on the proportion which has been previously observed between the hardening of the strands and the twisting of the closing rope. It is, in all cases, better to adjust these precisely, and then nothing remains to be done when the top has arrived at the upper end of the walk. The making of two strand and three strand line pointed out the principle which should be attended to in this case; namely, that the twist given to the rope in laying should be precisely what a perfectly soft rope would give to itself. We do not see any reason for thinking that the proportion between the number of turns given to the strands and the number of turns given to the laid line by its own elasticity, will vary by any difference of diameter. We would therefore recommend to the artists to settle this proportion

by experiment. The line should be made of the finest, smallest, and softest threads or yarn. These should be made into strands, and the strands should be hardened up in the direction contrary to the spinning twist. The rope should then be laid, hanging perpendicularly, with a small weight on the top to keep it down, and a very small weight at the end of the rope. The number of turns given to the strands should be carefully noticed, and the number of turns which the rope takes of itself in closing. The weight should then be taken off, and the rope will make a few turns more. This whole number will never exceed what is necessary for the equilibrium; and we imagine it will not fall much short of it. We are clearly of opinion an exact adjustment of this particular will tend greatly to improve the art of rope-making, and that experiments on good principles for ascertaining this proportion would be highly valuable, because there is no point about which the artists themselves differ more in their opinions and practice.

The cordage, of which we have been describing the manufacture, is said to be *HAWSER-LAID*. It is not uncommon to make ropes of four strands. These are used for shrouds, and this cordage is therefore called *SHROUD-LAID* cordage. A rope of the same size and weight must be smoother when it has four strands, because the strands are smaller: but it is more difficult to lay close. When three cylindrical strands are simply laid together, they leave a vacuity at the axis amounting to $\frac{1}{8}$ of the section of a strand. This is to be filled up by compressing the strands by twisting them. Each must fill up $\frac{1}{4}$ of it by changing its shape; and $\frac{1}{2}$ of this change is made on each side of the strand. The greatest change of shape therefore made on any one part of a strand amounts only to $\frac{1}{16}$ of the section of the strand. The vacuity between four cylinders is $\frac{1}{4}$ of one of them. This being divided into eight parts, is $\frac{1}{32}$ of a strand, and is the greatest compression which any part of it has to undergo. This is nearly five times greater than the former, and must be more difficult to produce. Indeed it may be seen by looking at the figures 11. and 12. that it will be easier to compress a strand into the obtuse angle of 120 degrees than into the right angle of 90; and without reasoning more about the matter, it appears that the difficulty will increase with the number of strands. Six strands must touch each other, and form an arch leaving a hollow in the middle, into which one of the strands will slip, and then the rest will not completely surround it. Such a rope would be uneven on the surface. It would be weak; because the central strand would be slack in comparison of the rest, and would not be exerting its whole force when they are just ready to break. We see then that a four strand rope must be more difficult to lay well than a hawser-laid rope. With care, however, they may be laid well and close, and are much used in the royal navy.

Ropes are made of four strands, with a heart or strand in the middle. This gives no additional strength, for the reason just now given. Its only use is to make the work better and more easy, and to support all the strands at the same distance from the axis of the rope. This is of great consequence; because when they are at unequal distances from the axis, some must be more sloping than others, and they will not resist alike. This heart

Rope-making.

15
Mode of making shroud-laid cordage of four strands,

16
And with a heart in the middle

Rope-making.

heart is made of inferior stuff, slack laid, and of a size just equal to the space it is to fill. When a rope of this fabric has been long used and become unserviceable, and is opened out, the heart is always found cut and chaffed to pieces, like very short oakum. This happens as follows: When the rope is violently strained, it stretches greatly; because the strands surround the axis obliquely, and the strain draws them into a position more parallel to the axis. But the heart has not the obliquity of parts, and cannot stretch so much; at the same time, its yarns are firmly grasped by the hard strands which surround them; they must therefore be torn into short pieces.

The process for laying a rope with a heart is not very different from that already described. The top has a hole pierced through it, in the direction of the axis. The skain or strand intended for the heart passes through this hole, and is stretched along the walk. A boy attends it, holding it tight as it is taken into the closing rope. But a little attention to what has been said will show this method to be defective. The wick will have no more turns than the laid rope; and as it lies in the very axis, its yarns will be much straighter than the strands. Therefore when the rope is strained and stretched, the wick cannot stretch as much as the laid strands; and being firmly grasped by them, it must break into short pieces, and the strands, having lost their support in those places, will sink in, and the cordage grow loose. We should endeavour to enable all to stretch alike. The wick therefore should be twisted in the same manner as the strands, perhaps even a little more. It will thus communicate part of its strength to the rope. Indeed it will not be so uniformly solid, and may chance to have three spiral vacuities. But that this does no harm, is quite evident from the superior strength of cable-laid cordage, to be described presently, which have the same vacuities. In this way are the main and fore stays made for ships of the line. They are thought stronger than hawser-laid ropes, but unfit for running rigging; because their strands are apt to get out of their places when the rope is drawn into loops. It is also thought that the heart retains water, rots, and communicates its putrefaction to the surrounding strands.

17
Recapitulation.

Such is the general and essential process of rope-making. The fibres of hemp are twisted into yarns, that they may make a line of any length, and stick among each other with a force equal to their own cohesion. The yarns are made into cords of permanent twist by laying them; and, that we may have a rope of any degree of strength, many yarns are united in one strand, for the same reason that many fibres were united in one yarn; and in the course of this process it is in our power to give the rope a solidity and hardness which makes it less penetrable by water, which would rot it in a short while. Some of these purposes are inconsistent with others: and the skill of a rope-maker lies in making the best compensation; so that the rope may on the whole be the best in point of strength, pliancy, and duration, that the quantity of hemp in it can produce.

18
Mode of making cable-laid cordage.

There is another species of cordage in very general use. A rope of two or more strands may be used as a strand, in order to compose a still larger rope; and in this manner are cables and other ground tackle com-

monly made; for this reason such cordage is called **CABLE-LAID** cordage. Rope-making.

The process of cable-laying hardly differs from that of hawser-laying. Three ropes, in their state of permanent twist, may be twisted together; but they will not hold it, like fine thread, because they are stiff and elastic. They must therefore be treated like strands for a hawser. We must give them an *additional* twist, which will dispose them to lay or close themselves; and this disposition must be aided by the workmen at the sledge. We say the twist should be an addition to their twist as a rope. A twist in the opposite direction will indeed give them a disposition to close behind the top; but this will be very small, and the ropes (now strands) will be exceedingly open, and will become more open in laying. The twist is therefore given in the direction of their twist as a rope, or opposite to that of the primary strands, of which the ropes are composed. These primary strands are therefore partly untwisted in cable-laying a rope, in the same manner as the yarns are untwisted in the usual process of rope-making.

We need not insist farther on this part of the manufacture. The reader must be sensible that the hawsers intended for strands of a cable must not be so much twisted as those intended to remain hawsers; for the twist given to a finished hawser is presumed to be that which renders it most perfect, and it must be injured by any addition. The precise proportion, and the distribution of the working up between the hardening of the strands and closing the cable, is a subject about which the artists are no better agreed than in the case of hawser-laid cordage. We did not enter on this subject while describing the process, because the introduction of reasonings and principles would have hurt the simplicity of the description. The reader being now acquainted with the different parts of the manipulation, and knowing what can be done on any occasion, will now be able to judge of the propriety of the whole, when he learns the principle on which the strength of a rope depends.

We have already said, that a rope-yarn should be twisted till a fibre will break rather than be pulled out from among the rest, and that all twisting beyond this is injurious to the strength of the yarn: And we advanced this maxim upon this plain consideration, that it is needless to bind them closer together, for they will already break rather than come out; and because this closer binding is produced only by forcibly wrapping the outer fibres round the inner, and drawing the outer ones tight. Thus these fibres are on the stretch, and are strained as if a weight were hung on each of them. The process of laying lines, of a permanent twist, shows that we must do a little more. We must give the yarn a degree of elastic contractility, which will make it lay itself and form a line or cord which will retain its twist. This must leave the fibres of the yarns in a state of greater compression than is necessary for just keeping them together. But more than this seems to be needless and hurtful. The same maxim must direct us in forming a rope consisting of strands, containing more than one yarn. A needless excess of twist leaves them strained, and less able to perform their office in the rope.

It not unfrequently happens, that the workman, in order to make his rope solid and firm, hardens up the

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Mode of estimating the strength of ropes.

Rope-making.

Rope-making.

20
Effect of
twisting on
the strength
of ropes,
&c.

the strands till they really break: and we believe that, in the general practice of making large hawfers, many of the outer yarns in the strands, especially those which chance to be outermost in the laid rope, and are therefore most strained, are broken during the operation.

But there is another consideration which should also make us give no greater twist in any part of the operation than is absolutely necessary for the firm cohesion of the parts, and this independent of the strain to which the fibres or yarns are subjected. Twisting causes all the fibres to lie obliquely with respect to the axis or general direction of the rope. It may just happen that one fibre or one yarn shall keep in the axis, and remain straight; all the rest must be oblique, and the more oblique as they are farther from the axis, and as they are more twisted. Now it is to be demonstrated, that when any strain is given to the rope in the direction of its length, a strain greater than this is actually excited on the oblique fibres, and so much the greater as they are more oblique; and thus the fibres which are already the weakest are exposed to the greatest strains.

Let CF (fig. 13.) represent a fibre hanging from a hook, and loaded with a weight F, which it is just able to bear, but not more. This weight may represent the absolute force of the fibre. Let such another fibre be laid over the two pulleys A, B (fig. 14.), which are in a horizontal line AB, and let weights F and f , equal to the former, be hung on the ends of this fibre, while another weight R, less than the sum of F and f , is hung on the middle point C by a hook or thread. This weight will draw down the fibre into such a position ACB, that the three weights F, R, and f , are in equilibrio by the intervention of the fibre. We affirm that this weight R is the measure of the relative strength of the fibre in relation to the form ACB; for the fibre is equally stretched in all its parts, and therefore in every part it is strained by the force F. If therefore the weights F and f are held fast, and any addition is made to the weight R, the fibre must break, being already strained to its full strength; therefore R measures its strength in relation to its situation. Complete the parallelogram ACBD, and draw the diagonal CD; because AB is horizontal, and $AC=BC$, DC is vertical, and coincides with the direction CR, by which the weight R acts. The point C is drawn by three forces, which are in equilibrio. They are therefore proportional to the sides of a triangle, which have the same directions; or, the force acting in the direction CA is to that acting in the direction CR as CA to CD. The point R is supported by the two forces CA, CB, which are equivalent to CD; and therefore the weight F is to the weight R as CA is to CD. Therefore the absolute strengths of the two fibres AC, BC, taken separately, are greater than their united strengths in relation to their position with respect to CR: and since this proportion remains the same, whatever equal weights are hung on at F and f , it follows, that when any strain DC is made to act on this fibre in the direction DC, it excites a greater strain on the fibre, because CA and CB taken together are greater than CD. Each fibre sustains a strain greater than the half of CD.

Now let the weight R be turned round the axis CR. This will cause the two parts of the fibre ACB to lap round each other, and compose a twisted line or cord

CR, as in fig. 15. and the parallelogram ACBD will remain of the same form, by the yielding of the weights F and f , as is evident from the equilibrium of forces. The fibre will always assume that form which makes the sides and diagonal in the proportion of the weights. While the fibres lap round each other, they are strained to the same degree, that is, to the full extent of their strength, and they remain in this degree of strain in every part of the line or cord CR. If therefore each of the fibres has the strength AB, the cord has the strength DC; and if F and f be held fast, the smallest addition to R will break the cord. The sum of the absolute strength of the two fibres of which this thread is composed is to the sum of their relative strengths, or to the strength of the thread, as $AC+CB$ is to CD, or as AC is to EC.

If the weights F and f are not held fast, but allowed to yield, a heavier weight r may be hung on at C without breaking the fibre; for it will draw it into another position A c B, such that r shall be in equilibrio with F and f . Since F and f remain the same, the fibre is as much strained as before. Therefore make ca , cb equal to CA and CB, and complete the parallelogram $acbd$. cd will now be the measure of the weight r , because it is the equivalent of ca and cb . It is evident that cd is greater than CD, and therefore the thread formed by the lapping of the fibre in the position acb is stronger than the former, in the proportion of cd to CD, or ce to CE. The cord is therefore so much stronger as the fibres are more parallel to the axis, and it must be strongest of all when they are quite parallel. Bring the pulleys A, B close to each other. It is plain that if we hang on a weight R less than the sum of F and f , it cannot take down the bight of the fibre; but if equal to them, although it cannot pull it down, it will keep it down. In this case, when the fibres are parallel to each other, the strength of the cord (improperly so called) is equal to the united absolute strengths of the fibres.

It is easy to see that the length of each of the fibres which compose any part CR of this cord is to the length of the part of the cord as AC to EC; and this is the case even although they should lap round a cylinder of any diameter. This will appear very clearly to any person who considers the thing with attention. Let ac (fig. 16.) be an indefinitely small portion of the fibre which is lapped obliquely round the cylinder, and let HKG be a section perpendicular to the axis. Draw ae parallel to the axis, and draw ec to the centre of the circle HKG, and ae' parallel to ec . It is plain that ec is the length of the axis corresponding to the small portion ac , and that ec is equal to ae .

Hence we derive another manner of expressing the ratio of the absolute and relative strength; and we may say that the absolute strength of a fibre, which has the same obliquity throughout, is to its relative strength as the length of the fibre to the length of the cord of which it makes a part. And we may say, that the strength of a rope is to the united absolute strength of its yarns as the length of the cord to the length of the yarns; for although the yarns are in various states of obliquity, they contribute to the strength of the cord in as much as they contribute immediately to the strength of the strands. The strength of the yarns is to that of the strands as the length of the yarns to that of the strands,

Rope-making.

strands, and the strength of the strands is to that of the rope as the length of the first to that of the last.

And thus we see that twisting the fibres diminishes the strength of the assemblage; because their obliquity, which is its necessary consequence, enables any external force to excite a greater strain on the fibres than it could have excited had they remained parallel; and since a greater degree of twisting necessarily produces a greater obliquity of the fibres, it must more remarkably diminish the strength of the cord. Moreover, since the greater obliquity cannot be produced without a greater strain in the operation of twisting, it follows, that immoderate twisting is doubly prejudicial to the strength of cordage.

21
Theoretical
deductions
confirmed
by Rea-
mur's expe-
riments.

These theoretical deductions are abundantly confirmed by experiment; and as many persons give their assent more readily to a general proposition when presented as an induction from unexceptionable particulars, than when offered as the consequence of uncontroverted principles, we shall mention some of the experiments which have been made on this subject. Mr Reaumur, one of the most zealous, and at the same time judicious, observers of nature made the following experiments. (*Mem. Acad. Paris*, 1711.)

1. A thread, consisting of 832 fibres of silk, each of which carried at a medium 1 dram and 18 grains, would hardly support $5\frac{1}{2}$ pounds, and sometimes broke with 5 pounds. The sum of the absolute strengths of the fibres is 1040 drams, or upwards of 8 pounds 2 ounces.

2. A skain of white thread was examined in many places. Every part of it bore $9\frac{1}{2}$ pounds, but none of it would bear 10. When twisted slack into a cord of 2 yarns it broke with 16 pounds.

3. Three threads were twisted together. Their mean strength was very nearly 8 pounds. It broke with $17\frac{1}{2}$, whereas it should have carried 24.

4. Four threads were twisted. Their mean strength was $7\frac{1}{2}$. It broke with $21\frac{1}{2}$ instead of 30. Four threads, whose strength was nearly 9 pounds, broke with 22 instead of 36.

5. A small and very well made hempen cord broke in different places with 58, 63, 67, 72 pounds. Another part of it was untwisted into its three strands. One of them bore $29\frac{1}{2}$, another $33\frac{1}{2}$, and the third 35; therefore the sum of their absolute strengths was 98. In another part which broke with 72, the strands which had already borne this strain were separated. They bore 26, 28, and 30; the sum of which is 84.

22
And by

those of Sir
C. Knowles.

The late admiral Sir Charles Knowles made many experiments on cordage of size. A piece of rope $3\frac{1}{2}$ inches in circumference was cut into many portions. Each of these had a fathom cut off, and it was carefully opened out. It was white, or untarred, and contained 72 yarns. They were each tried separately, and their mean strength was 90 pounds. Each corresponding piece of rope was tried apart, and the mean strength of the nine pieces was 4552 pounds. But 90 times 72 is 6480.

23
Further re-
marks on
twisting.

Nothing is more familiarly known to a seaman than the superior strength of rope-yarns made up into a skain without twisting. They call such a piece of rope a *SALVAGE*. It is used on board the king's ships for rolling tackles, slinging the great guns, butt-flings, nippers for holding the viol on the cable, and in every

service where the utmost strength and great pliancy are wanted.

Rope-making.

It is therefore sufficiently established, both by theory and observation, that the twisting of cordage diminishes its strength. Experiments cannot be made with sufficient precision for determining whether this diminution is in the very proportion, relative to the obliquity of the fibres, which theory points out. In a hawser the yarns lie in a great variety of angles with the axis. The very outermost yarn of a strand is not much inclined to the axis of the rope: for the inclination of this yarn to the axis of its own strand nearly compensates for the inclination of the strand. But then the opposite yarn of the same strand, the yarn that is next the axis of the rope lies with an obliquity, which is the sum of the obliquities of the strand and of the yarn. So that all the yarns which are really in the axis of the rope are exceedingly oblique, and, in general, the inside of the rope has its yarns more oblique than the outside. But in a laid rope we should not consider the strength as made up of the strengths of the yarns; it is made up of the strengths of the strands: For when the rope is violently stretched, it untwists as a rope, and the strands are a little more twisted; so that they are resisting as strands, and not as yarns. Indeed, when we consider the process of laying the rope, we see that it must be so. We know, from what has been already said, that the three strands would carry more when parallel than when twisted into a rope, although the yarns would then be much more oblique to the axis. The chief attention therefore should be turned to the making the most perfect strands.

We are fully authorized to say that the twist given to cordage should be as moderate as possible. We are certain that it diminishes the strength, and that the appearance of strength which its superior smoothness and hardness gives is fallacious. But a certain degree of this is necessary for its duration. If the rope is laid too slack, its parts are apt to open when it happens to be caught in short loops at its going into a pulley, &c. in which case some of the strands or yarns are apt to kink and break. It also becomes too pervious to water, which soaks and rots it. To prevent these and other such inconveniences, a considerable degree of firmness or hardness is necessary; and in order to give the cordage this appearance of superior strength, the manufacturer is disposed to exceed.

24
Experiments of
Du Hamel to ascer-
tain the
best degree
of twist,
&c.

Mr Du Hamel made many experiments in the royal dock-yards in France, with a view to ascertain what is the best degree of twist. It is usual to work up the yarns to $\frac{2}{3}$ of their length. Mr Du Hamel thought this too much, and procured some to be worked up only to $\frac{1}{4}$ of the length of the yarns. The strength of the first, by a mean of three experiments, was 4321, and that of the last was 5187.

He caused three ropes to be made from the same hemp, spun with all possible equability, and in such proportion of yarn that a fathom of each was of the same weight. The rope which was worked up to $\frac{2}{3}$ bore 4098 pounds; that which was worked up to $\frac{1}{4}$ bore 4850; and the one worked up to $\frac{1}{2}$ bore 6205. In another trial the strengths were 4250, 6753, and 7397. These ropes were of different sizes.

He had influence enough, in consequence of these experiments, to get a considerable quantity of rigging made

Rope-making.

made of yarns worked up only to $\frac{3}{4}$ of their length, and had them used during a whole campaign. The officers of the ships reported that this cordage was about $\frac{1}{4}$ lighter than the ordinary kind; nearly $\frac{1}{8}$ slenderer, so as to give less hold to the wind, was therefore more supple and pliant, and run easier through the blocks, and did not run into kinks; that it required fewer hands to work it, in the proportion of two to three; and that it was at least $\frac{1}{2}$ stronger. And they said that it did not appear to have suffered more by using than the ordinary cordage, and was fit for another campaign.

Mr Du Hamel also made experiments on other fabrics of cordage, which made all twisting unnecessary, such as simply laying the yarn in skains, and then covering it with a worming of small line. This he found greatly superior in strength, but it had no duration, because the covering opened in every short bending, and was soon fretted off. He also covered them with a woven coat in the manner practised for house-furniture. But this could not be put on with sufficient tightness, without an enormous expence, after the manner of a horse-whip. Small ropes were woven solid, and were prodigiously strong. But all these fabrics were found too soft and pervious to water, and were soon rendered unserviceable. The ordinary process of rope-making therefore must be adhered to; and we must endeavour to improve it by diminishing the twist as far as is compatible with the necessary solidity.

In pursuance of this principle, it is surely advisable to lay slack all such cordage as is used for standing rigging, and is never exposed to short bendings. Shrouds, stays, backstays, pendants, are in this situation, and can easily be defended from the water by tarring, serving, &c.

The same principle also directs us to make such cordage of four strands. When the strands are equally hardened, and when the degree of twist given in the laying is precisely that which is correspondent to the twist of the strands, it is demonstrable that the strands are lying less obliquely to the axis in the four-strand cordage, and should therefore exert greater force. And experience fully confirms this. Mr Du Hamel caused two very small hawsers to be made, in which the strands were equally hardened. One of them had three strands, and the other six with a heart. They were worked up to the same degree. The first broke with 865 pounds, and the other with 1325. Several comparisons were made, with the same precautions, between cordage of three and of four strands, and in them all the four-strand cordage was found greatly superior; and it appeared that a heart judiciously put in not only made the work easier and more perfect to the eye, but also increased the strength of the cordage.

It is surely unreasonable to refuse credit to such a uniform course of experiment, in which there is no motive for imposition, and which is agreeable to every clear notion that we can form on this complicated subject; and it argues a considerable presumption in the professional artists to oppose the vague notions which they have of the matter to the calm reflections, and minute examination of every particular, by a man of good understanding, who had no interest in misleading them.

The same principles will explain the superiority of

cable-laid cordage. The general aim in rope-making is to make every yarn bear an equal share of the general strain, and to put every yarn in a condition to bear it. But if this cannot be done, the next thing aimed at is, to put the yarns in such situations that the strains to which they are exposed in the use of the rope may be proportioned to their ability to bear it. Even this point cannot be attained, and we must content ourselves with an approach towards it.

The greatest difficulty is to place the yarns of a large strand agreeably to those maxims. Supposing them placed with perfect regularity round the yarn which is in the middle: they will lie in the circumferences of concentric circles. When this whole mass is turned equally round this yarn as an axis, it is plain that they will all keep their places, and that the middle yarn is simply twisted round its axis, while those of the surrounding circles are lapped round it in spirals, and that these spirals are so much more oblique as the yarns are farther from the axis. Suppose the sledge kept fast, so that the strand is not allowed to shorten. The yarns must all be stretched, and therefore strained; and those must be the most extended which are the farthest from the middle yarn. Now allow the sledge to approach. The strand contracts in its general length, and those yarns contract most which were most extended. The remaining extension is therefore diminished in all; but still those which are most remote from the middle are most extended, and therefore most strained, and have the smallest remainder of their absolute force. Unfortunately they are put into the most unfavourable situations, and those which are already most strained are left the most oblique, and have the greatest strain laid on them by any external force. But this is unavoidable: Their greatest hurt is the strains they sustain in the manufacture. When the strand is very large, as in a nine-inch hawser, it is almost impossible to bring the whole to a proper firmness for laying without straining the outer yarns to the utmost, and many of them are broken in the operation.

The reader will remember that a two-strand line was laid or closed merely by allowing it to twist itself up at the swivel of the looper; and that it was the elasticity arising from the twist of the yarn which produced this effect: and he would probably be surprised when we said, that, in laying a larger rope, the strands are twisted in a direction opposite to that of the spinning. Since the tendency to close into a rope is nothing but the tendency of the strands to untwist, it would seem natural to twist the strands as the yarns were twisted before. This would be true, if the elasticity of the fibres in a yarn produced the same tendency to untwist in the strand that it does in the yarn. But this is not the case. The contraction of one of the outer yarns of a strand tends to pull the strand backward round the axis of the strand: but the contraction of a fibre of this yarn tends to turn the yarn round its own axis, and not round the axis of the strand. It tends to untwist the yarn, but not to untwist the strand. It tends to untwist the strand only so far as it tends to contract the yarn. Let us suppose the yarn to be spun up to one-half the length of the fibres. The contracting power of this yarn will be only one-half of the force exerted by the fibres: therefore, whatever is the force necessary for closing the rope properly, the fibres of

Rope-making.

25
Superiority
of cable-
laid cor-
dage, &c.

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In laying
large ropes
the strands
are twisted
in a direc-
tion oppo-
site to that
of spinning,
and are
consequent-
ly stronger.

Rope-making.

the yarns must be exerting twice this force. Now let the same yarn, spun up to one-half, be made up in a strand, and let the strand be twisted in the opposite direction to the spinning till it has acquired the same elasticity fit for laying. The yarns are untwisted. Suppose to three-fourths of the length of the fibres. They are now exerting only four-thirds of the force necessary for laying, that is, two-thirds of what they were obliged to exert in the other case; and thus we have stronger yarns when the strands are equally strained. But they require to be more strained than the other; which, being made of more twisted yarn, sooner acquire the elasticity fit for laying. But since the elasticity which fits the strand for laying does not increase so fast as the strain on the fibres of the yarn which produces it, it is plain, that when each has acquired that elasticity which is proper for laying, the strands made of the slack-twisted yarn are the strongest; and the yarns are also the strongest; and being softer, the rope will close better.

Experience confirms all this; and cordage, whose strands are twisted in the opposite direction to the twist of spinning, are found to be stronger than the others in a proportion not less than that of 7 to 6.

27
Great cordage made by laying it twice.

Such being the difficulty of making a large strand, and its defects when made, we have fallen on a method of making great cordage by laying it twice. A hawser-laid rope, slack spun, little hardened in the strands, and slack laid, is made a strand of a large rope called a *cable* or *cablet*. The advantages of this fabric are evident. The strands are reduced to one-third or one-fourth of the diameter which they would have in a hawser of the same size. Such strands cannot have their yarns lying very obliquely, and the outer yarns cannot be much more strained than the inner ones. There must therefore be a much greater equality in the whole substance of cable-laid cordage, and from this we should expect superior strength.

Accordingly, their superiority is great, not less than in the proportion of 13 to 9, which is not far from the proportion of 4 to 3. A cable is more than a fourth part, but is not a third part, stronger than a hawser of the same size or weight.

They are seldom made of more than three hawsers of three strands each, though they are sometimes made of three four-stranded hawsers, or of four three-stranded. The first of these two is preferred, because four small strands can be laid very close; whereas it is difficult to lay well four hawsers, already become very hard.

The superiority of a cable-laid cordage being attributed entirely to the greater perfection of the strands, and this seeming to arise entirely from their smallness, it was natural to expect still better cordage by laying cables as the strands of still larger pieces. It has been tried, and with every requisite attention. But although they have always equalled, they have not decidedly excelled, common cables of the same weight; and they require a great deal more work. We shall not therefore enter upon the manipulations of this fabric.

There is only one point of the mechanical process of rope-making which we have not considered minutely; and it is an important one, viz. the distribution of the

total shortening of the yarns between the hardening of the strands and the laying the rope. This is a point about which the artists are by no means agreed. There is certainly a position of the strands of a laid rope which puts every part in equilibrio; and this is what an elastic, but perfectly soft rope (were such a thing possible), would assume. But this cannot be discovered by any experiments made on large or even on firm cordage; and it may not be thought sufficiently clear that the proportion which would be discovered by the careful fabrication of a very small and soft line is the same that will suit a cordage of any diameter. We must proceed much on conjecture; and we cannot say that the arguments used by the partisans of different proportions are very convincing.

The general practice, we believe, is to divide the whole of the intended shortening of the yarns, or the working up into three parts, and to employ two of these in hardening the strands, and the remaining third in closing the hawser.

Mr Du Hamel thinks, that this repartition is injudicious, and that the yarns are too much strained, and the strands rendered weak. He recommends to invert this proportion, and to shorten one-third in the hardening of the strands, and two-thirds in laying the hawser. But if the strain of the yarns only is considered, one should think that the outside yarn of a strand will be more strained in laying, in proportion to the yarn of the same strand, that is, in the very axis of the rope. We can only say, that if a very soft line is formed in this way, it will not keep its twist. This shows that the turns in laying were more than what the elasticity or hardening of the strands required. The experiments made on soft lines always showed a tendency to take a greater twist when the lines were made in the first manner, and a tendency to lose their twist when made in Mr Du Hamel's manner. We imagine that the true proportion is between these two extremes, and that we shall not err greatly if we halve the total shortening between the two parts of the process. If working up to two-thirds be insisted upon, and if it be really too much, Mr Du Hamel's repartition may be better, because part of this working will quickly go off when the cordage is used. But it is surely better to be right in the main point, the total working up, and then to adjust the distribution of it so that the finished cordage shall precisely keep the form we have given to it.

There must be the same uncertainty in the quadruple distribution of the working up a cable. When a cable has its yarns shortened to two-thirds, we believe the ordinary practice has been, 1st, To warp 180 fathoms; 2d, To harden up the strands 30 fathoms; 3d, To lay or close up 13 fathoms; 4th, To work up the hawsers nine fathoms; 5th, To close up eight fathoms. This leaves a cable of 120. Since Mr Du Hamel's experiments have had an influence at Rochefort, the practice has been to warp 190, to harden up 38, to lay up 12, to work up the hawsers 10, and then to close up six; and when the cable is finished, to shorten it two fathoms more, which our workmen call *throwing the turn well up*. This leaves a cable of 122 fathoms.

As there seems little doubt of the superiority of cordage shortened one-fourth over cordage shortened one-third, the following distribution may be adopted: warp

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30
Of the strains made use of during the operation.

190 fathoms, harden up 12, lay up 11, work up the hawfers 12, and close up 12 more, which will leave a cable of 143.

There is another question about which the artists are divided in their opinions, viz. the strains made use of during the operation. This is produced by the weight laid on the sledge. If this be too small, the strands will not be sufficiently tightened, and will run into kinks. The sledge will come up by starts; and a small inequality of twist in the strands will throw it askew. The top will not run well without a considerable pressure to throw it from the closing point, and therefore the cordage will neither close fairly nor firmly; on the other hand, it is evident, that the strain on the strands is a complete expenditure of so much of their force, and it may be so great as to break them. These are the extreme positions. And we think that it may be fairly deduced from our principles, that as great a strain should be laid on the strands as will make good work, that is, as will enable the rope to close nearly and completely, but no more. But can any general rule be given for this purpose?

The practice at Rochefort was to load the sledge till its weight and load were double the weight of the yarns when warped 180 fathoms. A six-inch hawfer will require about a ton. If we suppose the friction one-third of the weight; the strain on each strand will be about two hundred and a quarter weight. Mr Du Hamel thinks this too great a load, and proposes to put only five-fourths or three-sevenths of the weight of the cordage; and still less if a shorter piece be warped, because it does not require so much force to throw the twist from the two cranks to the middle of the strand. We shall only say, that stronger ropes are made by heavy loading the carriage, and working up moderately, than by greater shortening, and a lighter load; but all this is very vague.

31
General rule for computing the strength of cordage.

The reader will naturally ask, after this account of the manufacture, what is the general rule for computing the strength of cordage? It cannot be expected to be very precise. But if ropes are made in a manner perfectly similar, we should expect the strength to be in proportion to the area of their section; that is, to the square of their diameters or circumferences, or to the number of equal threads contained in them.

Nor does it deviate far from this rule; yet Mr Du Hamel shows, from a range of experiments made on all cordage of $3\frac{1}{2}$ inch circumference and under, that the strength increases a little faster than the number of equal threads. Thus he found that ropes of

9 threads bore	1014 pounds, instead of	946
12	1564	1262
18	2148	1893

We cannot pretend to account for this. We must also observe, that the strength of cordage is greatly improved by making them of yarn spun fine. This requires finely dressed hemp; and being more supple, the fibres lie close, and do not form such oblique spirals. But all hemp will not spin equally fine. Every stalk seems to consist of a certain number of principal fibres, which split more easily into a second set, and these more difficultly into a third set, and so on. The ultimate fineness, therefore, which a reasonable degree of dressing can give to hemp, bears some proportion, not in-

deed very precise, to the size of the stalk. The British and Dutch use the best hemp, spin their yarn the finest, and their cordage is considerably stronger than the French, much of which is made of their own hemp, and others of a coarse and harsh quality.

The following rule for judging of the weight which a rope will bear is not far from the truth. It supposes them rather too strong; but it is so easily remembered that it may be of use.

Multiply the circumference in inches by itself, and take the fifth part of the product, it will express the tons which the rope will carry. Thus, if the rope have 6 inches circumference, 6 times 6 is 36, the fifth of which is $7\frac{1}{5}$ tons; apply this to the rope of $3\frac{1}{2}$, on which Sir Charles Knowles made the experiments formerly mentioned, $3\frac{1}{2} \times 3\frac{1}{2} = 10,25$, $\frac{1}{5}$ of which is 2,05 tons, or 4592 pounds. It broke with 4550.

32
This may suffice for an account of the mechanical part of the manufacture. But we have taken no notice of the operation of tarring; and our reason was, that the methods practised in different rope-works are so exceedingly different, that we could hardly enumerate them, or even give a general account of them. It is evidently proper to tar in the state of twine or yarn; this being the only way that the hemp could be uniformly penetrated. The yarn is made to wind off one reel, and having passed through a vessel containing hot tar, it is wound up on another reel; and the superfluous tar is taken off by passing through a hole surrounded with spongy oakum; or it is tarred in skains or hauls, which are drawn by a capstern through the tar-kettle, and through a hole formed of two plates of metal, held together by a lever loaded with a weight.

It is established beyond a doubt, that tarred cordage when new is weaker than white, and that the difference increases by keeping. The following experiments were made by Mr Du Hamel at Rochefort on cordage of three inches (French) in circumference, made of the best Riga hemp.

August 8. 1741.		
	White.	Tarred.
Broke with	4500 pounds.	3400 pounds.
	4900	3300
	4800	3250
April 25. 1743.		
	4600	3500
	5000	3400
	5000	3400
September 3. 1746.		
	3800	3000
	4000	2700
	4200	2800

A parcel of white and tarred cordage was taken out of a quantity which had been made February 12. 1746. It was laid up in the magazines, and comparisons were made from time to time as follows:

	White bore.	Tarred bore.	Differ.
1746 April 14.	2645 pounds.	2312 pounds.	333
1747 May 18.	2762	2155	607
1747 Oct. 21.	2710	2050	660
1748 June 19.	2575	1752	823
1748 Oct. 2.	2425	1837	588
1749 Sep. 25.	2917	1865	1052

Mr

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making.

Mr Du Hamel says, that it is decided by experience, 1. That white cordage in continual service is one-third more durable than tarred. 2. That it retains its force much longer while kept in store. 3. That it resists the ordinary injuries of the weather one-fourth longer.

We know this one remarkable fact. In 1758 the shrouds and stays of the Sheer hulk at Portsmouth dockyard were overhauled, and when the worming and service were taken off, they were found to be of white cordage. On examining the storekeeper's books, they were found to have been formerly the shrouds and rigging of the Royal William, of 110 guns, built in 1715, and rigged in 1716. She was thought top-heavy and unfit for sea, and unrigged and her stores laid up. Some few years afterwards, her shrouds and stays were fitted on the Sheer hulk, where they remained in constant and very hard service for about 30 years, while every tarred rope about her had been repeatedly renewed. This information we received from Mr Brown, boatswain of the Royal William during the war 1758, &c.

Why then do we tar cordage? We thus render it more unpliant, weaker, and less durable. It is chiefly serviceable for cables and ground tackle, which must be continually wetted and even soaked. The result of careful observation is, 1. That white cordage, exposed to be alternately very wet and dry, is weaker than tarred cordage. 2. That cordage which is superficially tarred is constantly stronger than what is tarred throughout, and it resists better the alternatives of wet and dry. *N. B.* The shrouds of the Sheer hulk were well tarred and blacked, so that it was not known that they were of white cordage.

Tar is a curious substance, miscible completely with water. Attempts were made to anoint cordage with oils and fats which do not mix with water. This was expected to defend them from its pernicious effects. But it was distinctly found that these matters made the fibres of hemp glide so easily on each other, that it was hardly possible to twist them permanently. Before they grasped each other so hard that they could not be drawn, they were strained almost to breaking.

33
Effect of
tanning.

Attempts have been made to increase the strength of cordage by tanning. But although it remains a constant practice in the manufacture of nets, it does not appear that much addition, either of strength or durability, can be given to cordage by this means. The trial has been made with great care, and by persons fully able to conduct the process with propriety. But it is found that the yarns take so long time in drying, and are so much hurt by drying slowly, that the room required for a considerable rope-work would be immense; and the improvement of the cordage is but trifling, and even equivocal. Indeed tanning is a chemical process, and its effect depends entirely on the nature of the materials to which the tan is applied. It unquestionably condenses, and even strengthens, the fibre of leather: but for any thing that we know *à priori*, it may destroy the cohesion of hemp and flax; and experiment alone could decide the question. The result has been unfavourable; but it does not follow from this that a tan cannot be found which shall produce on the texture of vegetables effects similar to what oak-bark and other astringents produce on the animal fibre or membrane. It is well known that some dyes increase the

strength of flax and cotton, notwithstanding the corrosion which we know to be produced by some of the ingredients. This is a subject highly worth the attention of the chemist and the patriot.

ROPE-Dancer. See *ROPE-DANCER*.

ROPE-Yarn, among sailors, is the yarn of any rope untwisted, but commonly made up of junk; its use is to make finnet, matts, &c.

ROQUET. See *ROCKET*.

RORIDULA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants. The corolla is pentapetalous; the calyx pentaphyllous; the capsule trivalved; the antheræ scrotiform at the base.

ROSA, the *ROSE*: A genus of the polygamia order, belonging to the icosandria class of plants; and in the natural method ranking under the 35th order, *Senticosæ*. There are five petals; the calyx is urceolated, quinquefid, corneous, and straitened at the neck. The seeds are numerous, hispid, and affixed to the inside of the calyx.

The sorts of roses are very numerous; and the botanists find it very difficult to determine with accuracy which are species and which are varieties, as well as which are varieties of the respective species. On this account Linnæus, and some other eminent authors, are inclined to think that there is only one real species of rose, which is the *rosa canina*, or "dog-rose of the hedges," &c. and that all the other sorts are accidental varieties of it. However, according to the present Linnæan arrangement, they stand divided into 14 supposed species, each comprehending varieties, which in some sorts are but few, in others numerous.

The supposed species and their varieties, according to the arrangement of modern botanists, are as follow:

1. The *canina*, canine rose, wild dog-rose of the hedges, or hep-tree, grows five or six feet high, having prickly-stalks and branches, pinnated, five or seven-lobed leaves, with aculeated foot-stalks, smooth pedunculi, oval smooth germina, and small single flowers. There are two varieties, red-flowered and white-flowered. They grow wild in hedges abundantly all over the kingdom; and are sometimes admitted into gardens, a few to increase the variety of the shrubbery collection.

2. The *alba*, or common white-rose, grows five or six feet high, having a green stem and branches, armed with prickles, hispid pedunculi, oval smooth germina, and large white flowers. The varieties are,—large double white rose—dwarf single white rose—maiden-blush white rose, being large, produced in clusters, and of a white and blush-red colour.

3. The *Gallica*, or Gallican rose, &c. grows from about three or four to eight or ten feet high, in different varieties; with pinnated, three, five, or seven-lobed leaves, and large red and other coloured flowers in different sorts. This species is very extensive in supposed varieties, bearing the above specific distinction, several of which have been formerly considered as distinct species, but are now ranged among the varieties of the Gallican rose, consisting of the following noted varieties.

Common red officinal rose, grows erect, about three or four feet high, having small branches, with but few prickles, and large spreading half-double deep-red flowers.

Rope-Dan-
cer
||
Rosa.

Rosa. flowers.—*Rosa mundi* (rose of the world) or striped red rose, is a variety of the common red rose, growing but three or four feet high, having large spreading semi-double red flowers, beautifully striped with white—and deep red.—York and Lancaster variegated rose, grows five, six, or eight feet high, or more; bearing variegated red flowers, consisting of a mixture of red and white; also frequently disposed in elegant stripes, sometimes in half of the flower, and sometimes in some of the petals.—Monthly rose, grows about four or five feet high, with green very prickly shoots; producing middle-sized, moderately-double, delicate flowers, of different colours in the varieties. The varieties are, common red-flowered monthly rose—blush-flowered—white-flowered—striped-flowered. All of which blow both early and late, and often produce flowers several months in the year, as May, June, and July; and frequently again in August or September, and sometimes, in fine mild seasons, continues till November or December: hence the name *monthly rose*.—Double virgin-rose, grows five or six feet high, having greenish branches with scarce any spines; and with large double pale-red and very fragrant flowers.—Red damask rose, grows eight or ten feet high, having greenish branches, armed with short aculea; and moderately-double, fine soft-red, very fragrant flowers.—White damask rose, grows eight or ten feet high, with greenish very prickly branches, and whitish-red flowers, becoming gradually of a whiter colour.—Blush Belgic rose, grows three or four feet high, or more; having greenish prickly branches, five or seven lobed leaves, and numerous, very double, blush-red flowers, with short petals, evenly arranged.—Red Belgic rose, having greenish and red shoots and leaves, and fine double deep-red flowers.—Velvet rose, grows three or four feet high, armed with but few prickles; producing large velvet-red flowers, comprising semi-double and double varieties, all very beautiful roses.—Marbled rose, grows four or five feet high, having brownish branches, with but few prickles; and large, double, finely-marbled, red flowers.—Red-and-yellow Austrian rose, grows five or six feet high, having slender reddish-branches, armed with short brownish aculea; and with flowers of a reddish copper colour on one side, the other side yellow. This is a curious variety, and the flowers assume a singularly agreeable appearance.—Yellow Austrian rose, grows five or six feet high, having reddish very prickly shoots; and numerous bright-yellow flowers.—Double yellow rose, grows six or seven feet high; with brownish branches, armed with numerous large and small yellowish prickles; and large very double yellow flowers.—Frankfort rose, grows eight or ten feet high, is a vigorous shooter, with brownish branches thinly armed with strong prickles; and produces largish double purplish-red flowers, that blow irregularly, and have but little fragrance.

4. The centifolia, or hundred-leaved red rose, &c. grows from about three or four to six or eight feet high, in different sorts, all of them hispid and prickly; pinnated three and five lobed leaves; and large very double red flowers, having very numerous petals, and of different shades in the varieties. The varieties are, —common Dutch hundred-leaved rose, grows three or four feet high, with erect greenish branches, but moderately armed with prickles; and large remarkably double red flowers, with short regularly arranged petals.

—Blush hundred leaved rose, grows like the other, with large very double pale-red flowers.—Provence rose, grows five or six feet, with greenish-brown prickly branches, and very large double globular red flowers, with large petals folding over one another, more or less in the varieties.—The varieties are, common red Provence rose, and pale Provence rose; both of which having larger and somewhat looser petals than the following sort.—Cabbage Provence rose; having the petals closely folded over one another like cabbages.—Dutch cabbage rose, very large, and cabbages tolerably.—Childing Provence rose—Great royal rose, grows six or eight feet high, producing remarkably large, somewhat loose, but very elegant flowers.—All these are large double red flowers, somewhat globular at first blowing, becoming gradually a little spreading at top, and are all very ornamental fragrant roses.—Moss Provence rose, supposed a variety of the common rose; grows erectly four or five feet high, having brownish stalks and branches, very closely armed with short prickles, and double crimson-red flowers; having the calyx and upper part of the peduncle surrounded with a rough mossy-like substance, effecting a curious singularity. This is a fine delicate rose, of a high fragrance, which, together with its mossy calyx, renders it of great estimation as a curiosity.

5. The cinnamomea, or cinnamon rose, grows five or six feet high, or more, with purplish branches thinly aculeated; pinnated five or seven lobed leaves, having almost inermous petioles, smooth pedunculi, and smooth globular germina; with small purplish-red cinnamon-scented flowers early in May. There are varieties with double flowers.

6. The Alpina, or Alpine inermous rose, grows five or six feet high, having smooth or unarmed reddish branches, pinnated seven-lobed smooth leaves, somewhat hispid pedunculi, oval germina, and deep-red single flowers; appearing in May. This species, as being free from all kind of armature common to the other sorts of roses, is esteemed as a singularity; and from this property is often called the *virgin rose*.

7. The Carolina, or Carolina and Virginia rose, &c. grows six or eight feet high, or more, having smooth reddish branches, very thinly aculeated; pinnated seven-lobed smooth leaves, with prickly foot-stalks; somewhat hispid pedunculi, globose hispid germen, and single red flowers in clusters, appearing mostly in August and September. The varieties are, dwarf Pennsylvanian rose, with single and double red flowers—American pale-red rose. This species and varieties grow naturally in different parts of North America; they effect a fine variety in our gardens, and are in estimation for their late-flowering property, as they often continue in blow from August until October; and the flowers are succeeded by numerous red berry-like hews in autumn, causing a variety all winter.

8. The villosa, or villose apple-bearing rose, grows six or eight feet high, having strong erect brownish smooth branches; aculeated sparsely pinnated seven-lobed villose or hairy leaves, downy underneath, with prickly foot-stalks, hispid peduncles, a globular prickly germen; and large single red flowers, succeeded by large round prickly hews, as big as little apples. This species merits admittance into every collection as a curiosity for the singularity of its fruit, both for variety and

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and use; for it having a thick pulp of an agreeable acid relish, is often made into a tolerable good sweetmeat.

9. The *pimpinellifolia*, or burnet-leaved rose, grows about a yard high, aculeated sparsely; small neatly pinnated seven-lobed leaves, having obtuse folioles and rough petioles, smooth peduncles, a globular smooth germen, and small single flowers. There are varieties with red flowers—and with white flowers. They grow wild in England, &c. and are cultivated in shrubberies for variety.

10. The *spinossima*, or most spinous, dwarf burnet-leaved rose, commonly called *Scotch rose*, grows but two or three feet high, very closely armed with spines; small neatly pinnated seven-lobed leaves, with prickly foot-stalks, prickly pedunculi, oval smooth germen, and numerous small single flowers, succeeded by round dark-purple hips. The varieties are, common white-flowered—red-flowered—striped-flowered—marbled-flowered. They grow naturally in England, Scotland, &c. The first variety rises near a yard high, the others but one or two feet, all of which are single-flowered; but the flowers being numerous all over the branches, make a pretty appearance in the collection.

11. The *eglanteria*, *eglantine rose*, or sweet briar, grows five or six feet high, having green branches, armed with strong spines sparsely; pinnated seven-lobed odoriferous leaves, with acute folioles and rough foot-stalks, smooth pedunculi, globular smooth germen, and small pale-red flowers. The varieties are, common single-flowered—semi-double-flowered—double-flowered—blush double-flowered—yellow-flowered. This species grows naturally in some parts of England, and in Switzerland. It claims culture in every garden for the odoriferous property of its leaves; and should be planted in the borders, and other compartments contiguous to walks, or near the habitation, where the plants will impart their refreshing fragrance very profusely all around; and the young branches are excellent for improving the odour of nose-gays and bow-pots.

12. The *moschata*, or musk-rose, supposed to be a variety only of the ever-green musk-rose, hath weak smooth green stalks and branches, rising by support from six to eight or ten feet high or more, thinly armed with strong spines; pinnated seven-lobed smooth leaves, with prickly foot-stalks; hispid peduncles; oval hispid germen; and all the branches terminated by large umbellate clusters of pure-white musk-scented flowers in August, &c.

13. The *sempervirens*, or ever-green musk rose, hath a somewhat trailing stalk and branches, rising by support five or six feet high or more, having a smooth bark armed with prickles; pinnated five-lobed smooth shining evergreen leaves, with prickly petioles, hispid pedunculi, oval hispid germen; and all the branches terminated by clusters of pure-white flowers of a musky fragrance; appearing the end of July, and in August. The sempervirent property of this elegant species renders it a curiosity among the rosy tribe; it also makes a fine appearance as a flowering shrub. There is one variety, the deciduous musk-rose above-mentioned. This species and variety flower in August, and is remarkable for producing them numerously in clusters, continuing in succession till October or November.

The above 13 species of *rosa*, and their respective va-

rieties, are of the shrub kind; all deciduous, except the last sort, and of hardy growth, succeeding in any common soil and situation, and flowering annually in great abundance from May till October, in different sorts; though the general flowering season for the principal part of them is June and July: but in a full collection of the different species, the blow is continued in constant succession several months, even sometimes from May till near Christmas; producing their flowers universally on the same year's shoots, rising from those the year before, generally on long pedunculi, each terminated by one or more roses, which in their characteristic state consist each of five large petals and many stamina; but in the doubles, the petals are very numerous; and in some sorts, the flowers are succeeded by fruit ripening to a red colour in autumn and winter, from the seed of which the plants may be raised; but the most certain and eligible mode of propagating most of the sorts is by suckers and layers; and by which methods they may be increased very expeditiously in great abundance.

The white and red roses are used in medicine. The former distilled with water yields a small portion of a butyraceous oil, whose flavour exactly resembles that of the roses themselves. This oil and the distilled water are very useful and agreeable cordials. These roses also, besides the cordial and aromatic virtues which reside in their volatile parts, have a mild purgative one, which remains entire in the decoction left after distillation. The red rose, on the contrary, has an astringent and gratefully corroborating virtue.

ROSA (Salvator), an admirable painter, born at Naples in 1614. He was first instructed by Francesco Francavanzo, a kinsman: but the death of his father reduced him to sell drawings sketched upon paper for any thing he could get; one of which happening to fall into the hands of Lanfranc, he took him under his protection, and enabled him to enter the school of Spagnoletto, and to be taught moreover by Daniel Falcone, a distinguished painter of battles at Naples. Salvator had a fertile imagination. He studied nature with attention and judgment; and always represented her to the greatest advantage: for every tree, rock, cloud, or situation, that enters into his composition, shows an elevation of thought that extorts admiration. He was equally eminent for painting battles, animals, sea or land storms; and he executed these different subjects in such taste as renders his works readily distinguishable from all others. His pieces are exceedingly scarce and valuable; one of the most capital is that representing Saul and the witch of Endor, which was preserved at Versailles. He died in 1673; and as his paintings are in few hands, he is more generally known by his prints; of which he etched a great number. He painted landscapes more than history; but his prints are chiefly historical. The capital landscape of this master at Chiswick is a noble picture. However, he is said to have been ignorant of the management of light, and to have sometimes shaded faces in a disagreeable manner. He was however a man of undoubted genius; of which he has given frequent specimens in his works. A roving disposition, to which he is said to have given full scope, seems to have added a wildness to all his thoughts. We are told that he spent the early part of his life in a troop of banditti; and that the rocky desolate scenes

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in

Rosacea in which he was accustomed to take refuge, furnished him with those romantic ideas in landscape, of which he is so exceedingly fond, and in the description of which he so greatly excels. His *robbers*, as his detached figures are commonly called, are supposed also to have been taken from the life.

Salvator Rosa is sufficiently known as a painter; but until now we never heard of him as a musician. Among the musical manuscripts purchased at Rome by Dr Burney, was a music book of Salvator, in which are many airs and cantatas of different masters, and eight entire cantatas, written, set, and transcribed by this celebrated painter himself. From the specimen of his talents for music here given, we make no scruple of declaring, that he had a truer genius for this science, in point of melody, than any of his predecessors or contemporaries: there is also a strength of expression in his verses, which sets him far above the middle rank as a poet. Like most other artists of real original merit, he complains of the ill usage of the world, and the difficulty he finds in procuring a bare subsistence.

ROSACEA. See *Gutta Rosacea*.

ROSACEOUS, among botanists, an appellation given to such flowers as are composed of several petals or leaves disposed in a sort of circular form, like those of a rose.

ROSAMOND, daughter of Walter Lord Clifford, was a young lady of exquisite beauty, fine accomplishments, and blessed with a most engaging wit and sweetness of temper. She had been educated, according to the custom of the times, in the nunnery of Godstow; and the popular story of her is as follows: Henry II. saw her, loved her, declared his passion, and triumphed over her honour. To avoid the jealousy of his queen Eleanor, he kept her in a wonderful labyrinth at Woodstock, and by his connection with her had William Longsword earl of Salisbury, and Geoffrey bishop of Lincoln. On Henry's absence in France, however, on account of a rebellion in that country, the queen found means to discover her, and though struck with her beauty, she recalled sufficient resentment to poison her. The queen, it is said, discovered her apartment by a thread of silk; but how she came by it is differently related. This popular story is not however supported by history; several writers mention no more of her, than that the queen so vented her spleen on Rosamond as that the lady lived not long after. Other writers assert that she died a natural death; and the story of her being poisoned is thought to have arisen from the figure of a cup on her tomb. She was buried in the church of Godstow, opposite to the high altar, where her body remained till it was ordered to be removed with every mark of disgrace by Hugh bishop of Lincoln, in 1191. She was, however, by many considered as a saint after her death, as appears from an inscription on a cross which Leland says stood near Godstow:

*Qui meat hac oret, signum salutis adoret,
Utque sibi detur veniam. Rosamunda precetur.*

And also by the following story: Rosamond, during her residence at her bower, made several visits to Godstow; where being frequently reproved for the life she led, and threatened with the consequences in a future state, she always answered, that she knew she should be

saved; and as a token to them, showed a tree which she said would be turned into a stone when she was with the saints in heaven. Soon after her death this wonderful metamorphosis happened, and the stone was shown to strangers at Godstow till the time of the dissolution.

ROSARY, among the Roman Catholics. See CHAPLET.

ROSBACH, a town of Germany, in Saxony, famous for a victory obtained here by the king of Prussia over the French, on November 5. 1757, in which 10,000 of the French were killed or taken prisoners, with the loss of no more than 500 Prussians. See PRUSSIA, n^o 30.

ROSCHILD, a town of Denmark, in the isle of Zealand, with a bishop's see and a small university. It is famous for a treaty concluded here in 1658; and in the great church there are several tombs of the kings of Denmark. It is seated at the bottom of a small bay, in E. Long. 12. 20. N. Lat. 55. 40.

ROSCOMMON, a county of Ireland, in the province of Connaught, bounded on the west by the river Suc, on the east by the Shannon, on the north by the Curlew mountains, on the south and south east by the King's county and part of Galway. Its length is 35 miles, its breadth 28. The air of the county, both on the plains and mountains, is healthy; the soil yields plenty of grass with some corn, and feeds numerous herds of cattle. The Curlew mountains on the north are very high and steep; and, till a road with great labour and difficulty was cut through them, were impassable.

ROSCOMMON, which gives the title of earl to the family of Dillon, and name to the county, though not large, is both a parliamentary borough and the county town.

ROSCOMMON (Wentworth Dillon, earl of), a celebrated poet of the 17th century, was the son of James Dillon earl of Roscommon; and was born in Ireland, under the administration of the first earl of Strafford, who was his uncle, and from whom he received the name of *Wentworth* at his baptism. He passed his infancy in Ireland; after which the earl of Strafford sent for him into England, and placed him at his own seat in Yorkshire, under the tuition of Dr Hall, afterwards bishop of Norwich, who instructed him in Latin, without teaching him the common rules of grammar, which he could never retain in his memory, and yet he learnt to write in that language with classical elegance and propriety. On the earl of Strafford's being impeached, he went to complete his education at Caen in Normandy; and after some years travelled to Rome, where he became acquainted with the most valuable remains of antiquity, and in particular was well skilled in medals, and learned to speak Italian with such grace and fluency, that he was frequently taken for a native. He returned to England soon after the Restoration, and was made captain of the band of pensioners; but a dispute with the lord privy-seal, about a part of his estate, obliged him to resign his post, and revisit his native country, where the duke of Ormond appointed him captain of the guards. He was unhappily very fond of gaming; and as he was returning to his lodgings from a gaming-table in Dublin, he was attacked in the dark by three ruffians, who were employed to assassinate him.

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mon.

The earl defended himself with such resolution, that he had dispatched one of the aggressors, when a gentleman passing that way took his part, and disarmed another, on which the third sought his safety in flight. This generous assistant was a disbanded officer of good family and fair reputation, but reduced to poverty; and his lordship rewarded his bravery by resigning to him his post of captain of the guards. He at length returned to London; when he was made master of the horse to the duchess of York, and married the lady Frances, eldest daughter of Richard earl of Burlington, who had been the wife of Colonel Courtney. He here distinguished himself by his writings: and in imitation of those learned and polite assemblies with which he had been acquainted abroad, began to form a society for refining and fixing the standard of the English language, in which his great friend Mr Dryden was a principal assistant. This scheme was entirely defeated by the religious commotions which ensued on king James's accession to the throne. In 1683 he was seized with the gout; and being too impatient of pain, he permitted a bold French empiric to apply a repelling medicine, in order to give him present relief; which drove the distemper into his bowels, and in a short time put a period to his life, in January 1684. He was buried with great pomp in Westminster-abbey.

His poems, which are not numerous, are in the body of English poetry collected by Dr Johnson. His "Essay on Translated Verse," and his translation of "Horace's Art of Poetry," have great merit. Waller addressed a poem to his lordship upon the latter, when he was 75 years of age. "In the writings of this nobleman we view (says Fenton) the image of a mind naturally serious and solid; richly furnished and adorned with all the ornaments of art and science; and those ornaments unaffectedly disposed in the most regular and elegant order. His imagination might probably have been more fruitful and sprightly, if his judgment had been less severe; but that severity (delivered in a masculine, clear, succinct style) contributed to make him so eminent in the didactical manner, that no man, with justice, can affirm he was ever equalled by any of our nation, without confessing at the same time that he is inferior to none. In some other kinds of writing his genius seems to have wanted fire to attain the point of perfection; but who can attain it? He was a man of an amiable disposition, as well as a good poet; as Pope, in his 'Essay on Criticism,' hath testified in the following lines:

—Roscommon not more learn'd than good,
With manners generous as his noble blood;
To him the wit of Greece and Rome was known,
And every author's merit but his own."

We must allow of Roscommon, what Fenton has not mentioned so distinctly as he ought, and, what is yet very much to his honour, that he is perhaps the only correct writer in verse before Addison; and that, if there are not so many or so great beauties in his compositions as in those of some contemporaries, there are at least fewer faults. Nor is this his highest praise; for Pope has celebrated him as the only moral writer of King Charles's reign:

Unhappy Dryden! in all Charles's days,
Roscommon only boasts unspotted lays.

Of Roscommon's works, the judgment of the public seems to be right. He is elegant, but not great; he never labours after exquisite beauties, and he seldom falls into gross faults. His versification is smooth, but rarely vigorous, and his rhymes are remarkably exact. He improved taste, if he did not enlarge knowledge, and may be numbered among the benefactors to English literature.

ROSE, in botany. See ROSA.

Essence of Roses. See ROSES Otter.

ROSE of Jericho, so called because it grows in the plain of Jericho, though it did not originally grow there. It has perhaps been so named by travellers who did not know that it was brought from Arabia Petraea. Rose bushes are frequently found in the fields about Jericho; but they are of a species much inferior to those so much extolled in Scripture, the flowers of which some naturalists pretend to have in their cabinets.

"The rose shrub of Jericho (says Mariti) is a small plant, with a bushy root, about an inch and a half in length. It has a number of stems which diverge from the earth: they are covered with few leaves; but it is loaded with flowers, which appear red when in bud, turn paler as they expand, and at length become white entirely. These flowers appear to me to have a great resemblance to those of the elder-tree; with this difference, that they are entirely destitute of smell. The stems never rise more than four or five inches from the ground. This shrub sheds its leaves and its flowers as it withers. Its branches then bend in the middle, and becoming entwined with each other to the top, form a kind of globe. This happens during the great heats; but during moist and rainy weather they again open and expand.

"In this country of ignorance and superstition, people do not judge with a philosophical eye of the alternate shutting and opening of this plant: it appears to them to be a periodical miracle, which heaven operates in order to make known the events of this world. The inhabitants of the neighbouring cantons come and examine these shrubs when they are about to undertake a journey, to form an alliance, to conclude any affair of importance, or on the birth of a son. If the stems of the plants are open, they do not doubt of success; but they account it a bad omen to see them shut, and therefore renounce their project if it be not too late.

"This plant is neither subject to rot nor to wither. It will bear to be transplanted; and thrives without degenerating in any kind of soil whatever."

ROSES Otter (or essential oil of), is obtained from roses by simple distillation, and may be made in the following manner: A quantity of fresh roses, for example 40 pounds, are put in a still with 60 pounds of water, the roses being left as they are with their calyxes, but with the stems cut close. The mass is then well mixed together with the hands, and a gentle fire is made under the still; when the water begins to grow hot, and fumes to rise, the cap of the still is put on, and the pipe fixed; the chinks are then well luted with paste, and cold water put on the refrigeratory at top: the receiver is also adapted at the end of the pipe; and the fire is continued under the still, neither too violent nor too weak. When the impregnated water begins to come over, and the still is very hot, the fire is lessened.

Rose.

Rose,
Rosetta.

ed by gentle degrees, and the distillation continued till 30 pounds of water are come over, which is generally done in about four or five hours; this rose-water is to be poured again on a fresh quantity (40 pounds) of roses, and from 15 to 20 pounds of water are to be drawn by distillation, following the same process as before. The rose-water thus made and cohobated will be found, if the roses were good and fresh, and the distillation carefully performed, highly scented with the roses. It is then poured into pans either of earthen ware or of tinned metal, and left exposed to the fresh air for the night. The otter or essence will be found in the morning congealed, and swimming on the top of the water; this is to be carefully separated and collected either with a thin shell or a skimmer, and poured into a vial. When a certain quantity has thus been obtained, the water and feces must be separated from the clear essence, which, with respect to the first, will not be difficult to do, as the essence congeals with a slight cold, and the water may then be made to run off. If, after that, the essence is kept fluid by heat, the feces will subside, and may be separated; but if the operation has been neatly performed, these will be little or none. The feces are as highly perfumed as the essence, and must be kept, after as much of the essence has been skimmed from the rose-water as could be. The remaining water should be used for fresh distillations, instead of common water, at least as far as it will go.

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The above is the whole process, as given in the Asiatic Researches by lieutenant-colonel Polier*, of making genuine otter of roses. But attempts (he says) are often made to augment the quantity, though at the expense of the quality. Thus the raspings of sandal-wood, which contain a deal of essential oil, are used; but the imposition is easily discovered, both by the smell, and because the essential oil of sandal-wood will not congeal in common cold. In other places they adulterate the otter by distilling with the roses a sweet-scented grass, which colours it of a high clear green. This does not congeal in a slight cold. There are numerous other modes, far more palpable, of adulteration. The quantity of essential oil to be obtained from roses is very precarious, depending on the skill of the distiller, on the quality of the roses, and the favourableness of the season. The colour of the otter is no criterion of its goodness, quality, or country. The calyxes by no means diminish the quality of otter, nor do they impart any green colour to it. They indeed augment the quantity, but the trouble necessary to strip them is such as to prevent their being often used.

Rose-Noble, an ancient English gold coin, first struck in the reign of Edward III. It was formerly current at 6s. 8d. and so called because stamped with a rose. See MONEY.

Rose-Wood. See ASPALATHUS.

ROSETTO, a town of Africa, in Egypt, is pleasantly situated on the west side of that branch of the Nile called by the ancients *Bolbitinum*, affirmed by Herodotus to have been formed by art; the town and castle being on the right hand as you enter that river. Any one that sees the hills about Rosetta would judge that they had been the ancient barriers of the sea, and conclude that the sea has not lost more ground than the space between the hills and the water.

Rosetta,
Rosicrucians.

Rosetta is esteemed one of the pleasantest places in Egypt; it is about two miles long, and consists only of two or three streets. The country about it is most delightful and fertile, as is all the whole Delta on the other side of the Nile, exhibiting the most pleasant prospect of gardens, orchards, and corn-fields, excellently well cultivated. The castle stands about two miles north of the town, on the west side of the river. It is a square building, with round towers at the four corners, mounted with some pieces of brass cannon. The walls are of brick, cased with stone, supposed to have been built in the time of the holy war, though since repaired by Cheyk Begh. At a little distance lower, on the other side of the river, is a platform, mounted with some guns, and to the east of it are the salt lakes, out of which they gather great quantities of that commodity. At some farther distance, sailing up the river, we see a high mountain, on which stands an old building that serves for a watch-tower. From this eminence is discovered a large and deep gulph, in form of a crescent, which appears to have been the work of art, though it be now filled up, and discovers nothing but its ancient bed. Rosetta is grown a considerable place for commerce, and hath some good manufactures in the linen and cotton way; but its chief business is the carriage of goods to Cairo, all the European merchandise being brought thither from Alexandria by sea, and carried in other boats to that capital; as those that are brought down from it on the Nile are there shipped off for Alexandria; on which account the Europeans have here their vice-consuls and factors to transact their business; and the government maintains a beigh, a customhouse, and a garrison, to keep all safe and quiet.

In the country to the north of Rosetta are delightful gardens, full of orange, lemon, and citron trees, and almost all sorts of fruits, with a variety of groves of palm-trees; and when the fields are green with rice, it adds greatly to the beauty of the country. It is about 25 miles north-east of Alexandria, and 100 north-west of Cairo. E. Long. 30. 45. N. Lat. 31. 30.

ROSICRUCIANS, a name assumed by a sect or cabal of hermetical philosophers; who arose, as it has been said, or at least became first taken notice of, in Germany, in the beginning of the fourteenth century. They bound themselves together by a solemn secret, which they all swore inviolably to preserve; and obliged themselves, at their admission into the order, to a strict observance of certain established rules. They pretended to know all sciences, and chiefly medicine; whereof they published themselves the restorers. They pretended to be masters of abundance of important secrets, and, among others, that of the philosopher's stone; all which they affirmed to have received by tradition from the ancient Egyptians, Chaldeans, the Magi, and Gymnosophists. They have been distinguished by several names, accommodated to the several branches of their doctrine. Because they pretend to protract the period of human life, by means of certain nostrums, and even to restore youth, they were called *Immortales*; as they pretended to know all things, they have been called *Illuminati*; and because they have made no appearance for several years, unless the sect of Illuminated which lately started up on the continent derives its origin from them, they have been called the *invisible brothers*. Their society is

Rosicru-
cians.

frequently signed by the letters F. R. C. which some among them interpret *fratres rosis coeli*; it being pretended, that the matter of the philosophers stone is dew concocted, exalted, &c. Some, who are no friends to free-masonry, make the present flourishing society of free-masons a branch of Rosicrucians; or rather the Rosicrucians themselves, under a new name or relation, viz. as retainers to building. And it is certain, there are some free-masons who have all the characters of Rosicrucians; but how the æra and original of masonry (see MASONRY), and that of Rosicrucianism, here fixed from Naudæus, who has written expressly on the subject, consist, we leave others to judge.

Notwithstanding the pretended antiquity of the Rosicrucians, it is probable that the alchemists, Paracelsists, or fire-philosophers, who spread themselves through almost all Europe about the close of the sixteenth century, assumed about this period the obscure and ambiguous title of Rosicrucian brethren, which commanded at first some degree of respect, as it seemed to be borrowed from the arms of Luther, which were a cross placed upon a rose. But the denomination evidently appears to be derived from the science of chemistry. It is not compounded, says Mosheim, as many imagine, of the two words *rosa* and *crux*, which signify rose and cross, but of the latter of these words, and the Latin *ros*, which signifies dew. Of all natural bodies, dew was deemed the most powerful dissolvent of gold; and the cross, in the chemical language, is equivalent to light, because the figure of a cross $+$ exhibits, at the same time, the three letters of which the word *lux*, or light, is compounded. Now *lux* is called, by this sect, the seed or menstruum of the red dragon, or, in other words, that gross and corporeal light which, when properly digested and modified, produces gold. Hence it follows, if this etymology be admitted, that a Rosicrucian philosopher is one who, by the intervention and assistance of the dew, seeks for light, or, in other words, the substance called the philosopher's stone. The true meaning and energy of this denomination did not escape the penetration and sagacity of Gassendi, as appears by his *Examen Philosophiæ Fluddanæ*, sect. 15. tom. iii. p. 261. And it was more fully explained by Renaudot, in his *Conférences Publiques*, tom. iv. p. 87.

At the head of these fanatics were Robert Fludd, an English physician, Jacob Behmen, and Michael Mayer; but if rumour may be credited, the present Illuminated have a head of higher rank. The common principles, which serve as a kind of centre of union to the Rosicrucian society, are the following: They all maintain, that the dissolution of bodies, by the power of fire, is the only way by which men can arrive at true wisdom, and come to discern the first principles of things. They all acknowledge a certain analogy and harmony between the powers of nature and the doctrines of religion; and believe that the Deity governs the kingdom of grace by the same laws with which he rules the kingdom of nature; and hence they are led to use chemical denominations to express the truths of religion. They all hold, that there is a sort of divine energy, or soul, diffused through the frame of the universe, which some call the *æthereus*, others the *universal spirit*, and which others mention under different appellations. They all talk in the most superstitious manner of what they call the signatures of things, of the power

of the stars over all corporeal beings, and their particular influence upon the human race, of the efficacy of magic, and the various ranks and orders of demons—These demons they divide into two orders, *sylphs* and *gnomes*; which supplied the beautiful machinery of Pope's *Rape of the Lock*. In fine, the Rosicrucians and all their fanatical descendants agree in throwing out the most crude incomprehensible notions and ideas, in the most obscure, quaint, and unusual expressions.—Mosheim. Eccl. Hist. vol. iv. p. 266, &c. English edition, 8vo. See BEEHMEN and THEOSOPHISTS.

ROSIER. See PILATRE.

ROSIERS-AUX-SALINES, a town of France, in Lorraine, and in the bailiwick of Nancy, famous for its salt-works. The works that king Stanislaus made here are much admired. It is seated on the river Muert, in E. Long. 6. 27. N. Lat. 48. 32.

ROSKILD, formerly the royal residence and metropolis of Denmark, stands at a small distance from the Bay of Isefiord, not far from Copenhagen. In its flourishing state it was of great extent, and comprised within its walls 27 churches, and as many convents.—Its present circumference is scarcely half an English mile, and it contains only about 1620 souls. The houses are of brick, and of a neat appearance. The only remains of its original magnificence are the ruins of a palace and of the cathedral, a brick building with two spires, in which the kings of Denmark are interred. Little of the original building now remains. According to Holberg, it was constructed of wood, and afterwards built with stone, in the reign of Canute.—From an inscription in the choir, it appears to have been founded by Harold VI. who is styled king of Denmark, England, and Norway. Some verses, in barbarous Latin, obscurely allude to the principal incidents of his life; adding, that he built this church, and died in 980.—See Coxe's Travels into Poland, Russia, Sweden, and Denmark, vol. ii. p. 525.

ROSLEY-HILL, a village in Cumberland, with a fair on Whit-Monday, and every fortnight after till September 29. for horses, horned cattle, and linen cloth.

ROSLIN, or ROSKELYN, a place in the county of Mid Lothian in Scotland, remarkable for an ancient chapel and castle. The chapel was founded in 1446, by St Clare, prince of Orkney, for a provost, six prebendaries, and two singing-boys. The outside is ornamented with a multitude of pinnacles, and variety of ludicrous sculpture. The inside is 69 feet long, the breadth 34, supported by two rows of clustered pillars, between seven and eight feet high, with an aisle on each side. The arches are obtusely Gothic. These arches are continued across the side-aisles, but the centre of the church is one continued arch, elegantly divided into compartments, and finely sculptured. The capitals of the pillars are enriched with foliage, and a variety of figures; and amidst a heavenly concert appears a cherubim blowing the ancient Highland bagpipes. The castle is seated on a peninsulated rock, in a deep glen far beneath, and accessible by a bridge of great height. This had been the seat of the great family of Sinclair. Of this house was Oliver, favourite of James V. and the innocent cause of the loss of the battle of Solway Moss, by reason of the envy of the nobility on account of his being preferred to the command.

Rosier
||
Roslin.

Near

Roslin,
Rosmarinus.

Near this place the English received three defeats in one day under John de Segrave the English regent of Scotland in 1302. The Scots, under their generals Cummin and Frazer, had resolved to surprise Segrave; with which view they began their march on the night of Saturday preceding the first Sunday of Lent, and reached the English army by break of day. Segrave, however, had time to have fallen back upon the other division which lay behind him; but, either despising his enemies too much, or thinking that he would be dishonoured by a retreat, he encountered the Scots; the consequence of which was, that he himself was made prisoner, and all his men either killed or taken, except such as fled to the other division. As in this routed division there had been no fewer than 300 knights, each of whom brought at least five horsemen into the field, great part of the Scots infantry quickly furnished themselves with their horses; but, as they were dividing the spoils, another division of the English appeared, and the Scots were obliged to fight them also. The English, after a bloody engagement, were defeated a second time; which was no sooner done, than the third and most powerful division made its appearance. The Scots were now quite exhausted; and, pleading the excessive labours they had already undergone, earnestly requested their generals to allow them to retreat while it was yet in their power. Their two generals, who perhaps knew that to be impracticable, reminded them of the cause for which they were fighting, the tyranny of the English, &c. and by these arguments prevailed upon them to fight a third time; though, previous to the engagement, they were reduced to the cruel necessity of putting all the common soldiers whom they had made prisoners to the sword. The victory of the Scots at this time was less complete than the other two had been; since they could not prevent the retreat of the English to Edinburgh, nor Segrave from being rescued from his captivity.

ROSMARINUS, ROSEMARY, in botany: A genus of the monogynia order, belonging to the diandria class of plants, and in the natural method ranking under the 42d order, *Verticillata*. The corolla is unequal, with its upper lip bipartite; the filaments are long, curved, and simple, each having a small dent. There are two species, the *angustifolia* and *latifolia*, or narrow and broad leaved rosemary; of which the second has larger flowers and a stronger scent than the other. There are two varieties; one of the first sort with striped leaves, called the *silver rosemary*; and the other with yellow, whence it is called the *gold-striped rosemary*. These plants grow naturally in the southern parts of France, Spain, and Italy; where, upon dry rocky soils near the sea, they thrive prodigiously, and perfume the air in such a manner as to be smelt at a great distance from the land. — However, they are hardy enough to bear the cold of our ordinary winters, provided they be planted upon a poor, dry, gravelly soil, on which they will endure the cold much better than in a richer ground, where, growing more vigorously in summer, they are more apt to be injured by frost in winter; nor will they have such a strong aromatic scent as those on a dry and barren soil. They are to be propagated either by slips or cuttings.

Rosemary has a fragrant smell, and a warm pungent bitterish taste, approaching to those of lavender: the leaves and tender tops are strongest; next to those, the

cup of the flower; the flowers themselves are considerably the weakest, but most pleasant. Aqueous liquors extract great share of the virtues of rosemary leaves by infusion, and elevate them in distillation; along with the water arises a considerable quantity of essential oil, of an agreeable strong penetrating smell. Pure spirit extracts in great perfection the whole aromatic flavour of the rosemary, and elevates very little of it in distillation; hence the resinous mass, left upon extracting the spirit, proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of rosemary give over great part of their flavour in distillation with pure spirit; by watery liquors, their fragrance is much injured; by beating, destroyed.

ROSS, in Herefordshire, in England, 119 miles from London, is a fine old town, with a good trade, on the river Wye. It was made a free borough by Henry III. It is a populous place, famous for cyder, and was noted in Camden's time for a manufacture of iron-ware. There are in it two charity-schools, which lately have been enriched by a legacy of 200 l. *per annum*, from Mr Scott, in Dec. 1786, a second *Man of Ross*. And its market and fairs are well stored with cattle and other provisions. At the west end of it there is a fine broad causeway, constructed by Mr John Kyrle, the celebrated *Man of Ross*, who also raised the spire upward of 100 feet, and inclosed a piece of ground with a stone wall, and sunk a reservoir in its centre, for the use of the inhabitants of the town. He died in 1714, aged 90, with the blessing of all who knew him, both rich and poor. There cannot be a pleasanter country than the banks of the Wye, between this town and Monmouth. W. Long. 2. 25. N. Lat. 51. 56.

Ross, a county of Scotland, including Tayne and Cromarty, stretching 80 miles in length, and 78 in breadth, is bounded on the west by the western sea, and part of the isle of Sky; by Inverness, on the south; Strathnaver and Sutherland, on the north and north-east; and by Cromarty and the Murray-Frith on the east. Tayne includes the greater part of Ross, with the isles of Sky, Lewis, and Harries. Cromarty lies on the other side of the Murray-Frith, to the northward of Inverness, extending but 12 miles in length, bounded on the south and east by part of Ross and the Frith of Murray, and by the Frith of Cromarty on the north. The shire of Ross takes up the whole breadth of the island; and being much indented with bays and inlets from both seas, appears of a very irregular form. — These bays afford safe harbours for shipping, especially that of Cromarty, which is capacious enough to contain all the fleets of Europe, being land-locked on every side, and is in all respects one of the best harbours in the known world. The Frith of Tayne, on the east side of the shire, runs up 25 miles from the sea, as far as the Cape Tarbat, dividing Ross from Sutherland: it is about seven miles broad at the mouth, but, on account of quick sands, unsafe for navigation. The country of Ross is encumbered with huge mountains, on which the snow lies for the greatest part of the year; these, however, yield good pasture; but on the eastern side, next the German ocean, the country admits of agriculture, and produces good crops of corn. The valleys are fertilized by several rivers, among which we reckon the Okel, the Charron, and the Braan; besides a number of fresh-water lakes, which indeed are found

Ross.

Ros.
Rosino.

found in every part of this country. The valleys, or straths, are generally covered with wood; and near Alfrag there are forests of fir 15 or 20 miles in length, well stocked with deer and game of all sorts. Great numbers of black cattle, horses, sheep, and goats, are fed upon the mountains; and the sea, rivers, and lakes, teem with fish and fowl. The lochs on the western coast abound with herrings in the season, particularly Loch Eu, about nine miles long, and three in breadth; one part of this is formed by a bay, or inlet of the sea; and the other is a lake of fresh water. The sides of it are covered with wood, where formerly abundance of iron was smelted. Though the middle part of Rofs, called *Ardrofs*, is mountainous and scarce inhabited, the north-east parts on the rivers Okel, Charron, and Frith of Tayne, are fruitful, and abound with villages. Coygach and Afsgut, two northerly districts, are bare and hilly; yet they abound with deer and black cattle; and we see several good houses towards the coast, where there are also promontories, and huge rocks of marble. Ardmeanach, part of the peninsula betwixt the bays of Cromarty and Murray, is a barony, which of old bestowed a title on the king of Scotland's second son. The district of Glen-elchig, on the south-west, was the paternal estate of the earl of Seaforth, chief of the clan of Mackenzie: but the last earl of that name, having risen in rebellion, was in the year 1719 defeated at Glen-shiel, in this very quarter, together with a small body of Spaniards by whom he had been joined. His auxiliaries were taken; and though he himself, with some of his friends, escaped to the continent, his estate and honours were forfeited. At the same time, the king's troops, who obtained this victory, dismantled the castle of Yion-donnen, situated on an island in a bay that fronts the isle of Sky. It belonged to the crown; but the office of hereditary governor was vested in the earl of Seaforth, and here he had erected his magazine. Rofs is chiefly peopled by the Mackenzies and Frasers, two warlike clans, who speak Erse, and live in the Highland fashion. There are fisheries carried on along the coast; but their chief traffic is with sheep and black cattle. The chief towns of Rofs are Channerie, Dingwall, Tayne, and Fortrose.

ROSSANO, a strong town of Italy, in the kingdom of Naples, and in the Hither Calabria, with an archbishop's see, and the title of a principality. It is pretty large, well peopled, and seated on an eminence surrounded with rocks. There is nothing in this archiepiscopal city that claims much notice; the buildings are mean, the streets vilely paved and contrived. The number of inhabitants does not exceed 6000, who subsist by the sale of their oil, the principal object of their attention, though the territory produces a great deal of good wine and corn.

Rossano probably owes its origin to the Roman emperors, who considered it as a post equally valuable for strength and convenience of traffic. The Marsans, a family of French extraction, possessed this territory, with the title of prince, from the time of Charles II. to that of Alphonfus II. when the last male heir was, by that prince's order, put to death in Ischia, where he was confined for treason. It afterwards belonged to Bona, queen of Poland, in right of her mother Isabella, daughter to Alphonfus II. and at her decease returned to the crown. It was next in the possession of the Al-

dobrandini, from whom the Borghefi inherited it. So late as the 16th century, the inhabitants of this city spoke the Greek language, and followed the rites of the eastern church. Here was formerly the most celebrated rendezvous of the Basilian monks in Magna Græcia. E. Long. 16. 52. N. Lat. 39. 45.

ROS-SOLIS, *Sun-dew*, an agreeable spirituous liquor, composed of burnt brandy, sugar, cinnamon, and milk-water; and sometimes perfumed with a little musk. It has its name from being at first prepared wholly of the juice of the plant *ros solis*, or *drosera*. See *DROSERA*.

ROSTOCK, a town of Germany, in the circle of Upper Saxony, and duchy of Mecklenburg, with an university and a very good harbour. It is the best town in this country; and has good fortifications, with an arsenal. The duke has a strong castle, which may be looked upon as a citadel. It is divided into three parts, the Old, the New, and the Middle Towns. It was formerly one of the Hanseatic towns, and is still Imperial, under the protection of the duke of Mecklenburg. It is seated on a lake where the river Varne falls into it, and carries large boats. The government is in the hands of 24 aldermen, elected out of the nobility, university, and principal merchants; four of whom are burgomasters, two chamberlains, two stewards for the river, and two judges of civil and criminal matters. These 24 are called the Upper House, and have in a manner the whole executive power lodged in them, with the power of coining money, and electing officers. There is also a common council of 100 inferior citizens, who are summoned to give their advice upon extraordinary emergencies relating to the whole community. The principal things worth seeing are the fortifications, the prince's palace, the stadthouse, the arsenal, and the public library. The town is famous for good beer, which they export in great quantities. Some years ago they had no less than 250 privileged brewers, who, it is said, brewed so many thousand tuns a year, besides what particular persons brew for their own use. E. Long. 12. 55. N. Lat. 54. 8.

ROSTOFF, or Rostow, a large town of the Russian empire, and capital of a territory of the same name, with an archbishop's see, seated on the lake Coteri, in E. Long. 40. 25. N. Lat. 57. 5. The duchy of Rostoff is bounded on the north by Jaroslaw, on the east by Sutdal, on the south by the duchy of Moscow, and on the west by that of Tuere.

ROSTRA, in antiquity, a part of the Roman forum, wherein orations, pleadings, funeral harangues, &c. were delivered.

ROSTRUM, literally denotes the beak or bill of a bird; and hence it has been figuratively applied to the beak or head of a ship.

ROSYCRUCIANS. See *ROSICRUCIANS*.

ROT, a very fatal disease incident to sheep, arising from wet seasons, and too moist pasture. It is very difficult of cure, and is attended with the singular circumstance of a kind of animals being found in the blood-vessels. See *OVIS* and *SHEEP*.

ROTA, the name of an ecclesiastical court of Rome, composed of 12 prelates, of whom one must be a German, another a Frenchman, and two Spaniards; the other eight are Italians, three of whom must be Romans, and the other five a Bolognese, a Ferraran, a Milanese, a Venetian, and a Tuscan.—This is one of the

Ros. solis
Rota.

Rotaceæ the most august tribunals in Rome, which takes cognizance of all suits in the territory of the church, by appeal; as also of all matters, beneficiary and patrimonial.

ROTACEÆ (from *rota*, "a wheel"), the name of the 20th order in Linnæus's Fragments of a Natural Method; consisting of plants with one flat, wheel-shaped petal, without a tube. See **BOTANY**, p. 461.

ROTALA, in botany; a genus of the monogynia order, belonging to the triandria class of plants. The calyx is tridentate; there is no corolla; the capsule is trilocular and polyspermous.

ROTANG. See **CALAMUS**.

Definition
and in-
teresting
nature of
the subject.

ROTATION, is a term which expresses the motion of the different parts of a solid body round an axis, and distinct from the progressive motion which it may have in its revolution round a distant point. The earth has a rotation round its axis, which produces the vicissitudes of day and night; while its revolution round the sun, combined with the obliquity of the equator, produces the varieties of summer and winter.

The mechanism of this kind of motion, or the relation which subsists between the intensity of the moving forces, modified as it may be by the manner of application, and the velocity of rotation, is highly interesting, both to the speculative philosopher and to the practical engineer. The precession of the equinoxes, and many other astronomical problems of great importance and difficulty, receive their solutions from this quarter: and the actual performance of our most valuable machines cannot be ascertained by the mere principles of equilibrium, but require a previous acquaintance with certain general propositions of rotatory motion.

It is chiefly with the view of assisting the engineer that we propose to deliver in this place a few fundamental propositions; and we shall do it in as familiar and popular a manner as possible, although this may cause the application of them to the abstruse problems of astronomy to be greatly deficient in the elegance of which they are susceptible.

State of
the parti-
cles in mo-
ving round
an axis.

When a solid body turns round an axis, retaining its shape and dimensions, every particle is actually describing a circle round this axis, and the axis passes through the centre of the circle, and is perpendicular to its plane. Moreover, in any instant of the motion, the particle is moving at right angles with the radius vector, or line joining it with its centre of rotation. Therefore, in order to ascertain the direction of the motion of any particle P (fig. 1.), we may draw a straight line PC from the particle perpendicular to the axis AB of rotation. This line will lie in the plane of the circle Pmn of rotation of the particle, and will be its radius vector; and a line PQ drawn from the particle perpendicular to this radius vector will be a tangent to the circle of rotation, and will have the direction of the motion of this particle.

Plate
cccxl.

The whole body being supposed to turn together, it is evident, that when it has made a complete rotation, each particle has described a circumference of a circle, and the whole paths of the different particles will be in the ratio of these circumferences, and therefore of their radii; and this is true of any portion of a whole turn, such as $\frac{1}{2}$, $\frac{1}{3}$, or 20 degrees, or any arch whatever; therefore the velocities of the different particles are proportional to their radii vectores, or to their distances from the axis of rotation.

And, lastly, all these motions are in parallel planes, to which the axis of rotation is perpendicular.

When we compare the rotations of different bodies in respect of velocity, it is plain that it cannot be done by directly comparing the velocity of any particle in one of the bodies with that of any particle of the other; for, as all the particles of each have different velocities, this comparison can establish no ratio. But we familiarly compare such motions by the number of complete turns which they make in equal times, and we say that the second hand of a clock turns 60 times faster than the minute hand; now this comparison is equally just in any part of a turn as in the whole. While the minute hand moves round one degree, the second-hand moves 60; therefore, as the length or number of feet in the line uniformly described by a body in its progressive motion is a proper measure of its progressive velocity, so the number of degrees described by any particle of a whirling body in the circumference of its circle of rotation, or the angle described by any radius vector of that body, is a proper measure of its velocity of rotation. And in this manner may the rotation of two bodies be compared; and the velocity is with propriety termed **ANGULAR VELOCITY**.

An angle is directly as the length of the circumference on which it stands, and inversely as the radius of the circle, and may be expressed by the fraction of which the numerator is the arch, and the denominator the radius. Thus the angle PCP may be expressed by $\frac{PP}{PC}$. This fraction expresses the portion of the radius which is equal to the arch which measures the angle; and it is converted into the usual denomination of degrees, by knowing that one degree, or the 360th part of the circumference, is $\frac{1}{57,296}$ of the radius, or that

an arch of 57,296 degrees is equal to the radius.

When a solid body receives an impulse on any one point, or when that point is anyhow urged by a moving force, it cannot move without the other points also moving. And whatever is the motion of any particle, that particle must be conceived as urged by a force precisely competent to the production of that motion, by acting immediately on the particle itself. If this is not the force which really impels it is a force arising from the cohesion of the body. The particle immediately impelled by the external force is pressed towards its neighbouring particles, or is drawn away from them; and, by this change of place, the connecting forces are brought into action, or are excited; they act on the particles adjoining, and change, or tend to change, their distances from the particles immediately beyond them; and thus the forces which connect this next series of particles are also excited, and another series of particles are made to exert their forces; and this goes on through the body till we come to the remote particle, whose motion we are considering. The forces which connect it with the adjoining series of particles are excited, and the particle is moved. We frequently say that the external moving force is propagated through the body to the distant particle; but this is not accurate. The particle is really and immediately moved by the forces which connect it with those adjoining.

Rotations.
How the
rotation of
different
bodies in
respect of
velocity
may be
compared.

6

7

Effects, &c.
of the seve-
ral particles
connected
in one body
on each
other.

Rotation

Rotation

will greatly assist our conception of the manner in which motion is thus produced in a distant particle, if we consider the particles as so many little balls, connected with each other by slender spiral springs like cork-screws. This would compose a mass which would be compressible, or which could be stretched, &c. And if we give an impulse to one of these balls, we shall set the whole assemblage in motion round any axis which we may suppose to support it. Now any one of these balls is really and immediately moved by the elasticity of the spiral wires which join it to its neighbours.

8
The forces by which the particles of bodies act on each other are equal, and the consequences.

We are but little acquainted with the nature of these connecting forces. It can be learned only by the phenomena which are their effects. These are various, almost beyond description; but the mechanical philosopher has little to do with this variety. The distinctions which are the immediate causes of fluidity, of hardness, softness, elasticity, ductility, are not of very difficult conception. There is one general fact which is sufficient for our present purpose – the forces by which the particles of bodies act on each other are equal. This is a matter of unexcepted experience; and no other foundation can be given to it as a law of mechanical nature.

An immediate consequence of this law is, that when two external forces A and B are in equilibrium by the intervention of a solid body (or rather when a solid body is in equilibrium between two external forces), these forces are equal and opposite; for the force A is in fact in immediate equilibrium with the opposite forces exerted by the particle to which it is applied, and is therefore equal and opposite to the force resulting from the combination of all the forces which connect that particle with the series of particles immediately adjoining. This resulting force may with propriety be called the equivalent of the forces from the combination of which it results. The use of this term will greatly abbreviate language. This first set of connecting forces consists of a number of distinct forces corresponding to each particle of the series, and each force has an equal and opposite force corresponding to it: therefore the compound force by which the first series of particles acts on that to which the external force A is applied, is equal and opposite to the compound force which connects this first series with the next series. And the same thing must be said of each succeeding series of particles, till we come at last to the particle to which the external force B is immediately applied. The force exerted by this particle is equal and opposite to that external force; and it is equal to the compound force exerted by the second series of particles on that side; therefore the forces A and B are equal and opposite.

10 It results from this proposition, that *when any number of external forces are applied to a solid body, and it is in equilibrium between them, they are such as would be in equilibrium if they were all applied to one point.* Let the forces aA , bB , cC (fig. 2.), be applied to three particles of the solid body. Therefore aA is immediately in equilibrium with an equal and opposite force $A\alpha$, resulting from the composition of the force AD , which connects the particles A and B , and the force AE which connects A with C . In like manner bB is immediately in equilibrium with $B\beta$, the equivalent of the forces BF and BG ; and cC is in immediate equilibrium

with the equivalent $C\gamma$ of the forces CH and CI . We shall conceive it very clearly if we suppose the three forces $A\alpha$, $B\beta$, $C\gamma$, to be exerted by means of threads pulling at the solid body. The connecting parts between A and B , as also between A and C , are stretched. The lines AB and AC may be considered as elastic threads. Each thread is equally stretched through its whole length; and therefore if we take AD to represent the force with which the particle A is held back by the particle B , and if we would also represent the force with which B is held back by A , we must make BF equal to AD . Now (n° 9.) the forces AD and BF are equal and opposite; so are the forces AE and CI ; so are the forces CH and BG . Now it is evident, that if the six forces AD , BF , BG , CH , CI , AE , were applied to one particle, the particle would be in equilibrio; for each force is accompanied by an equal and opposite force: and if the force $A\alpha$ were applied in place of AD , AE , the equilibrium would remain, because $A\alpha$ is equivalent to AD and AE . The same is true of $B\beta$ and $C\gamma$. Therefore if the three forces $A\alpha$, $B\beta$, $C\gamma$, were applied to one point, they would be in equilibrio. Consequently if the three forces aA , bB , cC , which are respectively equal and opposite to $A\alpha$, $B\beta$, $C\gamma$, are so applied, they will be in equilibrio. It is plain that this demonstration may be extended to any number of forces.

We may just remark by the bye, that if three forces are thus in equilibrio, they are acting in one plane; and, if they are not parallel, they are really directed to one point: for any one of them must be equal and opposite to the equivalent of the other two; and this equivalent is the diagonal of a parallelogram, of which the other two are the sides, and the diagonal and sides of any parallelogram are in one plane; and since they are in one plane, and any one of them is in equilibrio with the equivalent of the other two, it must pass through the same point with that equivalent, that is, through the point of concurrence of the other two.

These very simple propositions are the foundation of the whole theory of statics, and render it a very simple branch of mechanical science. It has been made abstruse by our very attempts to simplify it. Many elaborate treatises have been written on the fundamental property of the lever, and in them all it has been thought next to an insuperable difficulty to demonstrate the equilibrium of a straight lever when the parallel forces are inversely as their distances from the fulcrum.

We think the demonstrations of Archimedes, Fontenex, D'Alembert, and Hamilton, extremely ingenious; but they only bring the mind into such a state of conception that it cannot refuse the truth of the proposition; and, except Mr Hamilton's, they labour under the disadvantage of being applicable only to commensurable distances and forces. Mr Vince's, in the Philosophical Transactions for 1794, is the most ingenious of them all; and it is wonderful that it has not occurred long ago. The difficulty in them all has arisen from the attempt to simplify the matter by considering a lever as an inflexible straight line. Had it been taken out of this abstract form, and considered as what it really is, a natural body, of some size, having its particles connected by equal and opposite forces, all difficulty would have vanished.

Rotation.

12
Mode of
conceiving
the magni-
tude of any
moving
force.

That we may apply these proportions to explain the motion of rotation, we must recollect an unquestionable proposition in dynamics, that the force which produces any motion is equal and opposite to the force which would prevent it, when applied in the same place and in the same line, or which would extinguish it in the same time in which we suppose it to be produced. Therefore the force which is excited and made to act on any particle of a body, by the action of an external force on another particle, so as to cause it to move round an axis, is equal and opposite to the force which, when applied to that particle in the opposite direction, would be in equilibrio with the external force.

13 The only distinct notion we can form of the magnitude of any moving force is the quantity of motion which it can produce by acting uniformly during some given time. This will be had by knowing the velocity which it will produce in a body of known bulk. Thus we know that the weight of ten pounds of matter acting on it for a second will cause it to fall 16 feet with an uniformly accelerated motion, and will leave it in a state such that it would move on for ever at the rate of 32 feet in a second; which we call communicating the velocity of 32 feet per second. In the same manner, the best way of acquiring a distinct conception of the rotatory effort of a moving force, is to determine the quantity of rotatory motion which it can produce by acting uniformly during some known time.

14
And of the
quantity
and effort
of rotatory
motions.

Let a solid body turn round an axis passing through the point C (fig. 3.) perpendicular to the plane of this figure. Let this rotation be supposed to be produced by an external force acting in the direction FP. Let this force be such, that if the body were free, that is, unconnected with any axis supported by fixed points, it would, by acting uniformly during a small moment of time, cause its centre of gravity G (A) to describe a line of a certain length parallel to FP. This we know to be the effect of a moving force acting on any solid body in free space. The centre of gravity will always describe a straight line. Other particles may chance to move differently, if the body, besides its progressive motion, has also a motion of rotation, as is generally the case. Draw GI parallel to FP, and make GI to GC as the velocity which the external force would communicate to the centre of the body (if moving freely, unconnected with a supported axis), to the velocity which it communicates to it in the same time round the axis

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Cc. Also let m be the number of equal particles, or the quantity of matter in the body. Then $m \cdot GI$ will express the quantity of motion produced by this force, and is a proper measure of it as a moving force; for GI is twice the space described during the given time with an uniformly accelerated motion.

But since the body cannot move any way but round the axis passing through C, the centre G will begin to move with the velocity, and in the direction, GH perpendicular to the line CG (nº 2.) And any particle A can only move in the direction AL, perpendicular to CA. Moreover, the velocities of the different particles are as their radii vectores; and CG is actually equal to the line GH, which expresses the velocity of a particle in G. Therefore CA will in like manner express the velocity of the particle A. If A express its quantity of matter, $A \cdot CA$ will express its quantity of motion, and will represent the force which would produce it by acting uniformly during the moment of time.

We expressed the external moving force by $m \cdot GI$. Part of it is employed in exciting the force $A \cdot CA$, which urges the particle A. In order to discover what part of the external force is necessary for this purpose, draw CP perpendicular to FP. The preceding observations show us, that the force wanted at A is equal to the force which, when applied at P in the direction FP, would balance the force $A \cdot CA$ applied to A in the direction LA. Therefore (by the property of the lever ACP, which is impelled at right angles at A and P) we must have CP to CA as the force $A \cdot CA$ to the balancing pressure, which must be exerted at P, or at any point in the line FP. This pressure is therefore $\frac{A \cdot CA \cdot CA}{CP}$ or $\frac{A \cdot CA^2}{CP}$.

As we took $m \cdot GI$ for the measure of the whole external force, GI being the velocity which it would communicate to the whole body moving in free space, we may take $G \cdot i$ for the velocity which would be communicated to the whole body by the pressure $\frac{A \cdot CA^2}{CP}$, and then this pressure will be

properly expressed by $m \cdot G \cdot i$. In like manner, $m \cdot i \cdot k$ may express the portion of the external force employed in communicating to another particle B the motion which it acquires; and so on with respect to all the particles of the body.

It must be desirable to see the manner in which the

3 S

forces

(A) We take this term in its usual sense, as expressing that point where the sum of the equal gravitations of each particle may be supposed united. It is by no means (though commonly supposed) the point where the equivalent of the real gravitations of the particles may be supposed to act, and to produce the same motion as when acting on each particle separately. It is this point only when all the particles gravitate alike, and in parallel directions. If the body were near the centre of the earth for instance, the gravitations of the different particles would neither be nearly equal nor in parallel lines; and the place of its real centre of gravity, on which the equivalent of its whole gravitation may be supposed to act, would be very different from G. Were we to denominate the point G, as usually determined, by its mathematical properties, we would call it the CENTRE OF POSITION; because its distance from any plane, or its position with respect to any plane, is the average distance and position of all the particles. The true designation of G is "the point through which if any plane whatever be made to pass, and if perpendiculars to this plane be drawn from every particle, the sum of all the perpendiculars on one side of this plane is equal to the sum of all the perpendiculars on the other side."

If we were to denominate G by its mechanical properties, we would call it the CENTRE OF INERTIA; for this is equal in every particle, and in the same direction: and it is not in consequence of gravity, but of inertia, that the body describes with the point G a line parallel to FP. We wish this remark to be kept in mind.

Rotation. forces are really concerned in giving motion to the different particles.

Suppose the external force to act immediately on the external particle F. The line FC connecting this particle with the axis in C is either stretched or compressed by the effort of giving motion to a remote particle A. It is plain that, in the circumstances represented in the figure, the line FC is compressed, and the axis is pushed by it against its supports in the direction Cc ; and the body must, on this account, resist in the opposite direction Ff . The particle A is dragged out of its position, and made to begin its motion in the direction AL perpendicular to AC. This cannot be, unless by the connection of the two lines AC, AF. A resists by its inertia, and therefore both AC and AF are stretched by dragging it into motion. By this resistance the line AC tends to contract itself again, and it pulls C in the direction Cc , and A in the direction Aa ; and if we take Cc to represent the action on C, Aa must be taken equal to it. In like manner AF is stretched and tends to contract, pulling F in the direction Fp and A in the direction $A\alpha$ with equal forces. Thus the particle A is pulled in the directions Aa and $A\alpha$; the particle F is pulled in the direction Fp , and pushed in the direction Ff ; and C is pulled in the direction Cc , and pushed in the direction Cx . Aa and $A\alpha$ have produced their equivalent AL, by which A is dragged into motion; Ff and Fp produce their equivalent Fg , by which the external force is resisted, and Fg is equal and opposite to $m.Gi$; the forces Cc and Cx produce their equivalent Cd by which the axis is pressed on its supports, and this is resisted by an equal and opposite reaction of the supports in the direction dC . The forces therefore which excite in the body the motion A.AL are both external, viz. the impelling force gF , and the supporting force dC . AL therefore is not only the immediate equivalent of Aa and $A\alpha$, but also the remote equivalent of gF and dC . We may therefore ascertain the proportion of gF (that is, of $m.Gi$) to AL (that is, of A.AC), independent of the property of the lever. gF is to AL in the ratio compounded of the ratios of gF to Fp or $A\alpha$, and of $A\alpha$ to AL. But we shall obtain it more easily by considering gF as the equivalent of AL and dC . By what has been demonstrated above, the directions of the three forces gF , AL, and dC must meet in one point E, and gF must be equal to the diagonal tE of the parallelogram Eet , of which the sides Ee , Et are respectively equal to AL and dC . Now tE is to Ee as the sine of the angle tEe to the sine of the angle Ete , that is, as the sine of CEA to the sine of CEP , that is, as CA to CP, as we have already demonstrated by the property of the lever. We preferred that demonstration as the shortest, and as abundantly familiar, and as congenial with the general mechanism of rotatory motions. And the intelligent reader will ob-

serve, that this other demonstration is nothing but the demonstration by the lever expanded into its own elements. Having once made all our readers sensible of this internal process of the excitement and operation of the forces which connect the particles, we shall not again have recourse to it.

It is evident that the sum of all the forces gF , or $m.Gi$, must be equal to the whole moving force $m.GI$, that $m.Pp$ may be $= m.GI$. That is, we must have $m.GI = \frac{\int A.CA^2}{CP}$; or, because CP is given when the position of the line FP is given, we must have $m.GI = \frac{\int A.CA}{CP}$, where both A and CA are variable quantities.

This equation gives us $m.GI.CP = \int A.CA^2$. Now we learn in mechanics that the energy of any force applied to a lever, or its power of producing a motion round the fulcrum, in opposition to any resistance whatever, is expressed by the product of the force by the perpendicular drawn from the fulcrum on the line of its direction. Therefore we may call $m.GI.CP$ the momentum (B), energy, or rotatory effort, of the force $m.GI$. And in like manner $\int A.CA^2$ is the sum of the momenta of all the particles of the body in actual rotation; and as this rotation required the momentum $m.GI.CP$ to produce it, this momentum balances, and therefore may express the energy of all the resistances made by the inertia of the particles to this motion of rotation. Or $\int A.CA^2$ may express it. Or, take p to represent the quantity of matter in any particle, and r to represent its radius vector, or distance from the axis of rotation, $\int p.r^2$ will express the momentum of inertia, and the equilibrium between the momentum of the external force $m.GI$, acting in the direction FP, and the combined momenta of the inertia of all the particles of the whirling body, is expressed by the equation $m.GI.CP = \int A.CA^2 = \int p.r^2$. The usual way of studying elementary mechanics gives us the habit of associating the word equilibrium with a state of rest; and this has made our knowledge so imperfect. But there is the same equilibrium of the actual immediate pressures when motion ensues from the action. When a weight A descending raises a smaller weight B by means of a thread passing over a pulley, the thread is equally stretched between the acting and resisting weights. The strain on this thread is undoubtedly the immediate moving force acting on B, and the immediate resisting force acting on A.

The same equation gives us $GI = \frac{\int p.r^2}{m.CP}$.

Now $GI : CG = \frac{\int p.r^2}{m.CP} : CG = \int p.r^2 : m.CP$. CG; but CG represents the velocity of the centre. Hence we derive this fundamental proposition $\int p.r^2 : m$

(B) The word *momentum* is very carelessly used by our mechanical writers. It is frequently employed to express the product of the quantity of matter and velocity, that is, the quantity of motion; and it is also used (with strict propriety of language) to express the power, energy, or efficacy of a force to produce motion in the circumstances in which it acts. We wish to confine it to this use alone. Sir Isaac Newton adhered rigidly to this employment of the term (indeed no man exceeds him in precision of expression), even when he used it to express the quantity of motion: for in these instances the energy of this quantity of motion, as modified by the circumstances of its action, was always in the ratio of the quantity of motion.

Rotation. : $m \cdot CP \cdot CG = GI : CG$; or, that $\int p \cdot r^2$ is to $m \cdot CP \cdot CG$ as the velocity of the body moving freely to the velocity of the centre of gravity round the axis of rotation.

tion of motion among whirling bodies the same quantity of whirling motion is preserved.

Rotation.

20 Therefore the velocity of the centre is $= \frac{m \cdot GI \cdot CP \cdot CG}{\int p \cdot r^2}$.

21 The velocity of any point B is $= \frac{m \cdot GI \cdot CP \cdot CB}{\int p \cdot r^2}$.

This fraction represents the length of the arch described by the point B in the same time that the body unconnected with any fixed points would have described GI.

22 Therefore the angular velocity (the arch divided by the radius) common to the whole body is $= \frac{m \cdot GI \cdot CP}{\int p \cdot r^2}$.

It may be here asked, how this fraction can express an angle? It evidently expresses a number; for both the numerator and denominator are of the same dimensions, namely, surfaces. It therefore expresses the portion of the radius which is equal to the arch measuring the angle; such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c. And to have this angle in degrees, we have only to recollect that the radius is $= 57.2958$.

23 This angular velocity will be a maximum when the axis of rotation passes through the centre of gravity G. For draw from any particle A the line Aa perpendicular to CG, and join AG. Then $CA^2 = GA^2 + CG^2 \pm 2 CG \times Ga$. Therefore $\int CA^2 = \int GA^2 + \int CG^2 \pm \int 2 CG \times Ga$. But, by the nature of the centre of gravity, the sum of all the $+ Ga$ is equal to that of all the $- Ga$; and therefore $\pm \int 2 CG \times Ga$ is nothing; and therefore $\int CA^2 = \int GA^2 + m \cdot CG^2$.

Therefore $\int CA^2$ or $\int p \cdot r^2$ is smallest, and $\frac{m \cdot GI \cdot CP}{\int p \cdot r^2}$ is greatest when $m \cdot CG^2$ is nothing, or when CG is nothing; that is, when C and G coincide.

24 The absolute quantity of motion in the whirling body, or the sum of the motions of all its particles, is $\frac{m \cdot GI \cdot CP \cdot \int p \cdot r}{\int p \cdot r^2}$. For the motion of each particle is $\frac{m \cdot GI \cdot CP \cdot p \cdot r}{\int p \cdot r^2}$.

25 Ratio of the resistance of a quantity of matter to a motion of rotation. The resistance which a given quantity of matter makes to a motion of rotation is proportional to $\int p \cdot r^2$. For this must be measured by the forces which must be similarly applied in order to give it the same angular motion or angular velocity. Thus let one external force be $m \cdot GI$, and the other $m \cdot \gamma$. Let both be applied at the distance CP. Let r be the radius vector in the one body, and ρ in the other; now the angular velocities $\frac{m \cdot GI \cdot CP}{\int p \cdot r^2}$ and $\frac{m \cdot \gamma \cdot CP}{\int \rho \cdot \rho^2}$ are equal by supposition. Therefore $m \cdot GI : m \cdot \gamma = \int p \cdot r^2 : \int \rho \cdot \rho^2$.

As in the communication of motion to bodies in free space a given force always produces the same quantity of motion; so in the communication of motion to bodies obliged to turn round axes, a given force, applied at a given distance from the axes, always produces the same quantity of momentum. Whence it may easily be deduced (and we shall do it afterwards), that as in the communication of motion among free bodies the same quantity of motion is preserved, so in the communica-

This is a proposition of the utmost importance in practical mechanics, and may indeed be considered as the fundamental proposition with respect to all machines of the rotatory kind when performing work; that is, of all machines which derive their efficacy from levers or wheels. There is a valuable set of experiments by Mr Smeaton in the Philosophical Transactions, Volume LXVI. which fully confirm it. We shall give an example by and by of the utility of the proposition, showing how exceedingly imperfect the usual theories of mechanics are which do not proceed on this principle.

With respect to the general proposition from which all these deductions have been made, we must observe, that the demonstration is not restricted to the time necessary for causing each particle to describe an arch equal to the radius vector. We assumed the radius vector as the measure of the velocity merely to simplify the notation. Both the progressive motion of the free body and the rotation of the whirling body are uniformly accelerated, when we suppose the external force to act uniformly during any time whatever; and the spaces described by each motion in the same time are in a constant ratio. The formulæ may therefore with equal propriety represent the momentary accelerations in the different cases.

It must also be observed, that it is not necessary to suppose that all the particles of the body are in one plane, and that the moving force acts in a line FP lying also in this plane. This was tacitly allowed, merely to make the present investigation (which is addressed chiefly to the practical mechanic) more familiar and easy. The equilibrium between the force $A \times CA$, which is immediately urging the particle A, and the force $m \cdot Gi$ employed at P or F, in order to excite that force at A, would have been precisely the same although the lines AC and FP had been in different planes, provided only that these planes were parallel. This is known to every person in the least acquainted with the wheel and axle. But if the external moving force does not act in a plane parallel to the circles of rotation of the different particles, it must be resolved into two forces, one of which is perpendicular to these planes, or parallel to the axis of rotation, and the other lying in a plane of rotation. And it is this last only that we consider as the moving force; the other tends merely to push the body in the direction of its axis, but has no tendency to turn it round that axis. When we come to consider the rotation of a body perfectly free, it will be necessary to attend particularly to this circumstance. But there are several important mechanical propositions which do not require this.

28 The motion of any body is estimated by that of its centre of gravity, as is well known. The difference between the motion of the centre of a free body and the motion of the centre of a body turning round an axis, is evidently owing to the connection which the parts of the body have with this axis, and to the action of the points of support on this axis. This action must be considered as another external force, combined with that which acts on the particle P, and therefore must be such as, if combined with it, would produce the very motion which we observe. That is, if

Rotation. we suppose the body unconnected with any fixed points, but as having its axis acted on by the same forces which these points exert, the body would turn as we observe it to do, the axis remaining at rest.

29 Therefore join I and H, and complete the parallelogram GIHK. It is plain that $m \cdot GK$ must represent the forces exerted by the axis on the fixed points.

30 If therefore GI should coincide with GH, and the point I with the point H, the force GK vanishes, and the body begins to turn round C, without exerting any pressure on the points of support; and the initial motion is the same as if the body were free. Or, the axis at C is then a *spontaneous* axis of conversion.

That this may be the case, it is necessary, in the first place, that the external force act in a direction perpendicular to CG; for GI is always parallel to FP: it being a leading proposition in dynamics, that when a moving force acts on any part whatever of a solid body, unconnected with fixed points, the centre of gravity will proceed in a straight line parallel to the direction of that force. In the next place GH must be equal to GI; that is, (n° 21) $\frac{m \cdot GI \cdot CP \cdot CG}{\int p r^2}$

is equal to GI, or $\frac{m \cdot CP \cdot CG}{\int p r^2} = 1$, and $CP = \frac{\int p r^2}{m \cdot CG}$.

31 The equation $CP = \frac{\int p r^2}{m \cdot CG}$ gives us $m \cdot CG \cdot CP = \int p r^2 = \int A \cdot CA^2$. But it was shown (n° 23), that $\int A \cdot CA^2 = \int A \cdot GA^2 + m \cdot CG^2$. Therefore $\int A \cdot GA^2 = m \cdot CG \cdot CP - m \cdot CG \cdot CG = m \cdot CG (CP - CG)$, $= m \cdot CG \cdot GP$. Therefore we have (for another determination of the point of impulse P so as to annihilate all pressure on the axis) $GP = \frac{\int A \cdot GA^2}{m \cdot CG}$. This is generally the most easily obtained, the mathematical situation of the centre of gravity being well known.

32 N. B. When $CP = \frac{\int p r^2}{m \cdot CG}$, we shall always have the *velocity* of the centre the same as if the body were free, but there will always be a pressure on the points of support, unless FP be also perpendicular to CG. In other positions of FP the pressure on the axis, or on its points of support, will be $m \cdot GI \times 2 \sin. GCP$.

33 **Advantage of annihilating or diminishing the pressure on the supports of the axis of motion.** It would be a desirable thing in our machines which derive their efficacy from a rotatory motion, to apply the pressures arising from the power and from the resistance opposed by the work in such a manner as to annihilate or diminish this pressure on the supports of the axis of motion. Attention to this theorem will point out what may be done; and it is at all times proper, nay necessary, to know what are the pressures in the points of support. If we are ignorant of this, we shall run the risk of our machine failing in those parts; and our anxiety to prevent this will make us load it with needless and ill-disposed strength. In the ordinary theories of machines, deduced entirely from the principles of equilibrium, the pressure on the points of support (exclusive of what proceeds from the weight of the machine itself) is stated as the same as if the moving and resisting forces were applied immediately to these points in their own directions. But this is in all cases erroneous; and, in cases of swift motions, it is greatly so. We may be convinced of this by a very simple instance.

Rotation. Suppose a line laid over a pulley, and a pound weight at one end of it, and ten pounds at the other; the pressure of the axis on its support is eleven pounds, according to the usual rule; whereas we shall find it only $3\frac{7}{11}$. For, if we call the radius of the pulley 1, the momentum of the moving force is $10 \times 1 - 1 \times 1 = 9$; and the momentum of inertia is $10 \times 1^2 + 1 \times 1^2$. (n° 18.) $= 11$. Therefore the angular velocity is $\frac{9}{11}$. But the distance CG of the centre of gravity from the axis of motion is also $\frac{9}{11}$, because we may suppose the two weights in contact with the circumference of the pulley. Therefore the velocity of the centre of gravity is $\frac{9}{11} \times \frac{9}{11} = \frac{81}{121}$ of its natural velocity. It is therefore diminished $\frac{40}{121}$ by the figure of the axis of the pulley, and the 11 pounds press it with $\frac{40}{121}$ of their weight that is, with $3\frac{7}{11}$ pounds.

Since all our machines consist of inert matter, which requires force to put it in motion, or to stop it, or to change its motion, it is plain that some of our natural power is expended in producing this effect; and since the principles of equilibrium only state the proportion between the power and resistance which will preserve the machine at rest, our knowledge of the actual performance of a machine is imperfect, unless we know how much of our power is thus employed. It is only the remainder which can be stated in opposition to the resistance opposed by the work. This renders it proper to give some general propositions, which enable us to compute this with ease.

It would be very convenient, for instance, to know some point in which we might suppose the whole rotatory part of the machine concentrated; because then we could at once tell what the momentum of its inertia is, and what force we must apply to the impelled point of the machine, in order to move it with the desired velocity.

Let S, fig. 3. be this point of a body turning round the supported axis passing through C; that is, let S be such a point, that if all the matter of the body were collected there, a force applied at P will produce the same angular velocity as it would if applied at the same point of the body having its natural form.

The whole matter being collected at S, the expression $\frac{m \cdot GI \cdot CP}{\int p r^2}$ of the angular velocity becomes $\frac{m \cdot GI \cdot CP}{m \cdot CS^2}$ (n° 22.); and these are equal by supposition. Therefore $\int p r^2 = m \cdot CS^2$, and $CS = \sqrt{\frac{\int p r^2}{m}}$.

This point S has been called the **CENTRE of GYRATION**.

In a line or slender rod, such as a working beam, or the spoke of a wheel in a machine, CS is $\sqrt{\frac{1}{3}}$ of its length.

In a circle or cylinder, such as the solid drain of a capstan, $CS = \sqrt{\frac{1}{2}}$ its radius, or nearly $\frac{1}{\sqrt{2}}$. But if it turns round one of its diameters, $CS = \frac{1}{2}$ radius.

In the periphery of a circle, or rim of a wheel, $CS =$ radius nearly.

If it turn round a diameter, $CS = \sqrt{\frac{1}{2}}$ radius. The surface of a sphere, or a thin spherical shell, turning round a diameter, has $CS = \sqrt{\frac{2}{5}}$ radius, or nearly $\frac{2}{5}$ or $\frac{1}{2}$.

A solid sphere turning round a diameter has $CS = \sqrt{\frac{2}{5}}$ radius, or nearly $\frac{2}{5}$. This is useful in the problem

Rotation. blem of the precession of the equinoxes. We may observe by the way, that if we consider the whirling body as a system of several bodies with rigid or inflexible connections, we may consider all the matter of each of these bodies as united in its centre of gyration, and the rotation of the whole will be the same; for this does not change the value of $\frac{\int p r^2}{m}$.

36 A simpler mode of allowing for the inertia of machines. There is another way of making this correction of the motion of a machine, or allowing for the inertia of the machine itself, which is rather simpler than the one now given. We can suppose a quantity of matter collected at the point to which the moving force is applied, such that its inertia will oppose the same resistance to rotation that the machine does in its natural form. Suppose the moving force applied at P, as before, and that instead of the natural form of the body a quantity of matter = $\frac{\int p r^2}{C P}$, collected at P; the moving force

will produce the same angular velocity as on the body, in its natural form. For the angular velocity in this case must be $\frac{m \cdot G I \cdot C P}{\int p r^2 \cdot C P^2}$ (n^o 22.), which is $\pm \frac{m \cdot G I \cdot C P}{\int p r^2}$

the same as before.

37 Centre of oscillation. A point O may be found, at such a distance from the axis, that if all the matter of the body were collected there, and an external force $m \cdot G I$ applied to it in a direction perpendicular or any how inclined to C O, it will produce the same angular velocity as when applied to the centre of gravity G, with the same inclination to the line C G.

In this case, the angular velocity must be $\frac{m \cdot G I \cdot C O}{m \cdot C O^2}$

(n^o 22.), which is $= \frac{G I}{C O}$. This must be equal (by supposition) to the angular velocity where the same force $m \cdot G I$ is applied in the same inclination to G.—

The angular velocity in this case must be $\frac{m \cdot G I \cdot C G}{\int p r^2}$

38 Therefore we have $\frac{G I}{C O} = \frac{m \cdot G I \cdot C G}{\int p r^2}$, and $\frac{C O}{G I} = \frac{\int p r^2}{m \cdot G I \cdot C G}$, and $C O = \frac{\int p r^2}{m \cdot C G}$. Also, as in n^o 31. $G O = \frac{\int A \cdot G A^2}{m \cdot C G}$.

This point O has several remarkable properties.

39 Remarkable properties of it. In the first place, it is the point of a common heavy body swinging round C by its gravity, where, if all its weight be supposed to be concentrated, it will perform its oscillations in the same time. For while the body has its natural form, the whole force of gravity may be supposed to be exerted on its centre of gravity. When the matter of the body is collected at O, the force of gravity is concentrated there also; and if C G have the same inclination to the horizon in the first case that C O has in the second, the action of gravity will be applied in the same angle of inclination, and the two bodies will acquire the same angular velocity; that is, they will descend from this situation to the vertical situation (that is, through an equal angle) in the same time. These two bodies will therefore oscillate in equal times. For this reason, the point O so taken in the line

C G, which is the radius vector of the centre of inertia, that C O is equal to $\frac{\int A \cdot C A^2}{m \cdot C G}$, or $G O = \frac{\int A \cdot G A^2}{m \cdot C G}$, is called the CENTRE OF OSCILLATION of the body; and a heavy point suspended by a thread of the length C O is called its *equivalent* or *synchronous pendulum*, or the *simple pendulum*, corresponding to the body itself, which is considered as a *compound pendulum*, or as consisting of a number of simple pendulums, which by their rigid connection disturb each other's motions.

That C O may be the equivalent pendulum, and O the centre of oscillation, O must be in the line C G, otherwise it would not rest in the same position with the body, when no force was keeping it out of its vertical position. The equation $C O = \frac{\int A \cdot C A^2}{m \cdot C G}$ only deter-

mines the distance of the centre of oscillation from the centre of suspension, or the length of the equivalent simple production, but does not determine the precise point of the body occupied by the centre of oscillation; a circumstance also necessary in some cases.

Mathematicians have determined the situation of this point in many cases of frequent occurrence. Huyghens, in his *Horologium Oscillatorium*, and all the best writers of treatises of mechanics, have given the method of investigation at length. The general process is, to multiply every particle by the square of its distance from the axis of suspension, and to divide the sum of all these products by the product of the whole quantity of matter multiplied by the distance of its centre of gravity from the same axis. The quotient is the distance of the centre of oscillation, or the length of the equivalent

simple pendulum: for $C O = \frac{\int p r^2}{m \cdot C G}$.

a. If the body is a heavy straight line, suspended by one extremity, C O is $\frac{2}{3}$ of its length.

b. This is nearly the case of a slender rod of a cylindrical or prismatic shape. It would be exactly so if all the points of a transverse section were equally distant from the axis of suspension.

c. If the pendulum is an isosceles triangle suspended by its apex, and vibrating perpendicularly to its own plane, C O is $\frac{2}{3}$ of its height.

d. This is nearly true of a very slender triangle (that is, whose height many times exceeds its base) swinging round its vertex in any direction.

e. In a very slender cone or pyramid swinging from its vertex C O, is $\frac{2}{3}$ of its height nearly.

f. If a sphere, of which r is the radius, be suspended by a thread whose weight may be neglected, and whose length is l , the distance between its centre of suspension and centres of oscillation is $a + r + \frac{2}{3} \frac{r^2}{a + r}$; and

the distance between its centres of bulk and oscillation is $\frac{2}{3} \frac{r}{a + r}$. Thus, in a common second's pendulum,

whose length at London is about $39\frac{1}{8}$ inches, the centre of oscillation will be found about $\frac{1}{100}$ of an inch below the centre of the ball, if it be two inches in diameter.

g. If the weight of the thread is to be taken into the account, we have the following distance between the centre of the ball and that of oscillation, where B is the weight of the ball, a the distance of the point of

Rotation.

40 Mode of determining its situation.

Rotation. of suspension and its centre, d the diameter of the ball, and w the weight of the thread or rod,
 $GO = \frac{(\frac{1}{2}w + \frac{2}{3}B) d^2 - \frac{1}{8}w (ad + a^2)}{(\frac{1}{2}w + B) a - \frac{1}{2}dw}$: or, if we consider the weight of the thread as an unit, and the weight of the ball as its multiple (or as expressed by the number of times it contains the weight of the thread),
 $GO = \frac{\frac{1}{8}a}{B + \frac{1}{2}}$.

41 As the point O, determined as above, by making
 $CO = \frac{\int p r^2}{m.CG}$, is the centre of oscillation of the body turning round C, so C is the centre of oscillation of the same body turning round O: for, resuming A.CA in place of $p r$, we have $\int A.CA^2 = m.CO.CG$. Now $\int A.CA^2 = \int A.OA^2 + \int A.OC^2 - \int A.OC.2 O \dot{a}$, (Euclid, II. 12. 13.), or $m.CO.CG = \int A.OA^2 + \int A.OC^2 - \int A.OC.2 O \dot{a}$. But $\int A.OC^2 = m.OC^2 = m.OC.OC$; and (by the nature of the centre of gravity) $\int A.OC.2 O \dot{a} = m.OC.2 OG$. Therefore we have $m.CO.CG = \int A.OA^2 + m.OC.OC - m.OC.2 OG$; and $\int A.OA^2 = m.OC.CG + m.CO.2 OG - m.CO.CO$, $= m.CO (CG + 2 OG - CO)$. But $CG + 2 OG - CO$ is equal to $CO + OG$, and $CG + 2 OG - CO$ is equal to OG . Therefore $\int A.OA^2 = m.CO.OG$, and $CO = \frac{\int A.OA^2}{m.OG}$, which is all that is wanted (according to n^o 39.) to make C the centre of oscillation when O is the centre of suspension.

42 If the point of suspension, or axis of rotation, be anywhere in the circumference of a circle of which G is the centre, the point O will be in the circumference of another circle of which G is the centre: for, by n^o 38.
 $GO = \frac{SA.GA^2}{m.CG}$. Now $\int A.GA^2$ is a fixed quantity; and therefore while CG is constant, OG will also be constant.

43 We may also observe, that the distance of the axis from the centre S of gyration is a mean proportional between its distance from the centre G of gravity and the centre O of oscillation: for we had (n^o .)
 $CS^2 = \frac{\int p r^2}{m}$, and $CO = \frac{\int p r^2}{m.CG}$, and therefore
 $CO.CG = \frac{\int p r^2}{m} = CS^2$ and $CO : CS = CS : CG$.

44 We see also that the distance CO is that at which an external force must be applied; so that there may not be any pressure excited in the axis upon its points of support, and the axis may be a spontaneous axis of conversion. This we learn, by comparing the value of CO with that of CP in art. 30. This being the case, it follows, that if an external force is applied in a direction passing thro' O, perpendicularly to CO, it will produce the same initial velocity of the centre as if the body were free: for as it exerts no pressure on the points of support, the initial motion must be the same as if they were not there.

45 If the external force be applied at a greater distance in the line CG, the velocity of the centre will be greater than if the body were free. In this case the pressure excited in the axis will be backward, and consequently the points of support will re-act forward, and this re-action will be equivalent to another external

force conspiring with the one applied at O. Some curious consequences may be deduced from this.

If the external force be applied to a point in the line GC, lying beyond C, the motion of the centre will be in the opposite direction to what it would have taken had the body been free, and so will be the pressures exerted by the points of support on the axis.

A force $m.GI$ applied at P produces the initial progressive motion $m.GH$; and any force applied at O, perpendicularly to CG, produces the same motion of the centre as if the body were free. Therefore a force $m.GH$ applied thus at O will produce a motion $m.GH$ in the centre, and therefore the same motion which $m.GI$ applied at P would produce; and it will produce the momentum $m.GI$ at P. Therefore if a force equal to the progressive motion of the body be applied at O, perpendicularly to CO, in the opposite direction, it will stop all this motion without exciting any strain on the axis or points of support. Therefore the equivalent of all the motions of each particle round C is conceived as passing through O in a direction perpendicular to CO; and the blow given by that point to any body opposed to its motion is considered as equal to the compounded effect of the rotatory motion, or to the progressive motion of the body combined with its rotation.

For such reasons O has been called the CENTRE OF PERCUSSION of the body turning round C. But the name of *centre of momentum*, or *rotatory effort*, would have been more proper.

We can feel this property of the point O when we give a smart blow with a stick. If we give it a motion round the joint of the wrist only, and strike smartly with a point considerably nearer or more remote than $\frac{2}{3}$ of its length, we feel a painful shock or wrench in the hand; but if we strike with that point which is precisely at $\frac{2}{3}$ of its length, we feel no such disagreeable strain.

Mechanical writers frequently say, that O considered as the centre of percussion, is that with which the most violent blow is struck. But this is by no means true; O is that point of a body turning round C which gives a blow precisely equal to the progressive motion of the body, and in the same direction. As we have already said, it is the point where we may suppose the whole rotatory momentum of the body accumulated. Every particle of the body is moving in a particular direction, with a velocity proportional to its distance from the axis of rotation; and if the body were stopped in any point, each particle tending to continue its motion endeavours to drag the rest along with it. Whatever point we call the centre of percussion should have this property, that when it is stopped by a sufficient force, the whole motion and tendency to motion of every kind should be stopped; so that if at that instant the supports of the axis were annihilated, the body would remain in absolute rest.

The consideration of a very simple case will show that this point of stoppage cannot be taken indifferently. Suppose a square or rectangular board CDD'C', fig. 4. advancing in the direction GH, perpendicular to its plane, without any rotation. Let G be the centre of gravity, and the middle of the board. It is evident, that if a force be applied at G, in the direction HG, and

46 Why this point is sometimes called the centre of percussion.

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Improperity of the term.

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Centre of percussion, how defined.

Rotation and equal to the quantity of motion of the board, all motion will be stopped: for when the point G is stopped, no reason can be assigned why one part of the board shall advance more than another. The same thing must happen if the board be stopped by a straight edge put in its way, and passing through G: for example, in the line LGM, or gGb . But if this edge be so placed that the board shall meet it with the line IPK, then, because this line does not divide it equally, and because there is a greater quantity of motion in the part CIKC' than in the part IDD K, though the progressive motion may be stopped, the upper part will advance, and a motion of rotation will commence, of which IK will be the axis. Now suppose that the board, instead of having been moving along in the direction GH, every part with the same velocity had been swinging round the axis CC' like a pendulum, from the position Cdd' C', and that it is stopped by a straight edge meeting it in the line LGM parallel to CO', in the moment that it has attained the vertical position CDD'C'; all its motion will not be stopped: for, although LGM divides the board equally, there is more motion in the lower part LDD'M than in the upper part CLMC', because every particle of the lower part is describing larger circles and moving swifter. Therefore when the line LGM is stopped, there will be a tendency of the lower part to advance, and the pivots C and C' of the axis will be pressed backwards on their holes; and if the holes were at that instant removed, a rotation would commence, of which LM is the axis. The board must therefore be stopped in some line IPK below LGM, and so situated, that the sum of all the momenta on each side of it shall be equal. This alone can hinder a rotation round the axis IPK. From what has been already demonstrated, it appears, that this will be prevented if the edge meets the board in a line IPK passing through O the centre of oscillation, which is situated in the line gGb passing through the centre of gravity perpendicular to the axis CC'. This line IOK may therefore be called the *line* or *axis* of percussion.

51 But any point of this line will not do. It is evident that if the board should meet the fixed edge in the line $gGO b$, all motion will be stopped, for the motions on each side are equal, and neither can prevail. But if it be stopped in the line pPq , there is more motion in the part $p q D'C'$ than in the part $p q DC$; and if the supports at C and C' were that instant taken away, there would commence a rotation round the axis $p q$. Consequently, if the body were not stopped by an edge, but by a simple point at P, this rotation would take place. The motions above and below P would indeed balance each other, but the motions on the right and left sides of it would not. Therefore it is not enough for determining the centre of percussion that we have ascertained its distance gO from the axis of rotation by the equation $gO = \frac{\int p r^2}{m \cdot g \cdot G}$. This equation only gives us the line IOK parallel to CC', but not the point of percussion. This point (suppose it P) must be such that if any line pPq be drawn through it, and considered as an axis round which a rotation may commence, it shall not commence, because the sum of all the momenta round this axis on the right side is equal to the

sum of the momenta on the left. Let us investigate in what manner this condition may be secured.

Let there be a body in a state of rotation round the axis Dd (fig. 5.), and let G be its centre of gravity, and CGO a line through the centre of gravity perpendicular to the axis DCd. At the moment under consideration, the centre of gravity is moving in the direction GH, perpendicular to the radius vector GC, as also perpendicular to a plane passing through the lines Dd and CG. Let O be the centre of oscillation. Draw the line nO parallel to Dd. The centre of percussion must be somewhere in this line. For the point of percussion, wherever it is, must be moving in the same direction with the progressive motion of the body, that is, in a direction parallel to GH, that is, perpendicular to the plane DCG. And its distance from the axis Dd must be the same with that of the centre of oscillation. These conditions require it therefore to be in some point of nO. Suppose it at P. Draw Pp perpendicular to Dd. P must be so situated, that all the momenta tending to produce a rotation round the line pP may balance each other, or their sum total be nothing.

Now let A be any particle of the body which is out of the plane DCG, in which lie all the lines CGO, pP, nOP, &c. Draw its radius vector Aa perpendicular to Dd, and draw an parallel to CG, and therefore perpendicular to Dd. The plane A an is perpendicular to the plane D an (Euclid, XI. 4). Draw AL perpendicular to Aa, and Al perpendicular to an. Then, while the body is beginning to turn round Dd, the incipient motion of the particle A is in the direction AL, perpendicular to its radius vector Aa. This motion AL may be considered as compounded of the motion Al, perpendicular to the plane DCG, and the motion /L in this plane. It is evident that it is Al only which is opposed by the external force stopping the body at P, because A / alone makes any part of the progressive motion of the centre of gravity in the direction GH.

We have hitherto taken the *radii vectores* for the measures of the velocities or motions of the particles: Therefore the quantity of motion or the moving force of A is A.Aa, and this is exerted in the direction AL, and may be conceived as exerted on any point in this line, and therefore on the point L. That is, the point L might be considered as urged in this direction with the force A.Aa, or with the two forces of which the force A.Aa is compounded. The force in the direction AL is to the force in the direction Al as AL to Al, or as aA to al, because the triangles A / L and a / A are similar. Therefore, instead of supposing the point L urged by the force A.Aa, acting in the direction AL, we may suppose it impelled by the force A.al, acting perpendicularly to the line A /, or to the plane DCG, and by the force A.A / acting in this plane, viz. in the direction Ln. This last force has nothing to do with the percussion at P. Therefore we need consider the point L as only impelled by the force A.A / . The momentum of this force, or its power to urge the plane DCG forward in the direction GH, by turning it round Dd, must be A . al . aL. (N. B. This is equal to A . A a², because al : aA = aA : aL, and A . A a², has been shown long ago to be the general

Rotation.

neral expression of the rotatory momentum of a particle).

Draw Lm perpendicular to Pp . If we consider Pp as an axis about which a motion of rotation may be produced, it is plain that the momentum of the point L to produce such a rotation will be $A.al.Lm$. In like manner, its momentum for producing a rotation round nP would be $A.al.Ln$. In general, its momentum for producing rotation round any axis is equal to the product of the perpendicular force at L (that is, $A.al$) and the distance of L from this axis.

In order therefore that P may be the centre of percussion, the sum of all the forces $A.al.Lm$ must be equal to nothing; that is, the sum of the forces $A.al.Lm$ on one side of this axis Pp must be balanced by the sum of forces $A'al.L'm'$ on the other side. To express this in the usual manner, we must have $\sum A.al.nP = 0$. But $nP = nO - OP$. Therefore $\sum A.al.nO - \sum A.al.OP = 0$, and $\sum A.al.nO = \sum A.al.OP$. But OP is the same wherever the particle A is situated; and because G is the centre of gravity, the sum of all the quantities $A.al$ is $m.GC$, m being the quantity of matter of the body; that is, $\sum A.al = m.GC$, and $\sum A.al.OP = m.GC.OP$, $= \sum A.al.nO$. Hence we derive the final equation

$$OP = \frac{\sum A.al.nO}{m.GC}.$$

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Therefore the centre of percussion P of a body turning round the axis Dd is determined by these conditions: 1st, It is in the plane DCG passing through the axis and the centre of gravity; 2d, It is in a line nO passing through the centre of oscillation, and parallel to the axis, and therefore its distance Pp from the axis of rotation is $\frac{\sum A.Aa^2}{m.CG}$; and, 3d, Its distance OP from the centre of oscillation is $\frac{\sum A.al.nO}{m.CG}$.

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How both
centres co-
incide.

In order therefore that the centres of oscillation and percussion may coincide, or be one and the same, OP must vanish, or $\sum A.al.nO$ must be equal to nothing, that is, the sum of all the quantities $A.al.nO$ on one side of the line CO must be equal to the sum of all the quantities $A'al.l'n'O$ on the other side.

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Let $Dd\delta\Delta$ be a plane passing through the axis Dd perpendicular to that other plane DCG through it, in which the centre of gravity is situated, and let $Cg\gamma\kappa$ be a third plane passing through the centre of gravity perpendicular to both the planes $Dd\delta\Delta$ and DCG . Draw lr and $a\alpha$ perpendicular to aL , and $r\dot{\alpha}$ perpendicular to $c\dot{r}$, and then draw $A\alpha$, $A\dot{\alpha}$ perpendicular to $a\alpha$ and $r\dot{\alpha}$. It is evident that $A\alpha$ and $A\dot{\alpha}$ are respectively equal to al and lr , or to al and no ; so that the two factors or constituents of the momentum of a particle A round the centre of percussion are the distances of the particle from the planes $Dd\delta\Delta$ and $\kappa c g \gamma$, both of which are perpendicular to that plane through the axis in which the centre of gravity is placed.

We may see, from these observations, that the centres of oscillation and percussion do not necessarily coincide, and the circumstance which is necessary for their coincidence, viz. that $\sum A.A\alpha.A\dot{\alpha}$ is equal to 0. It is of importance to keep this in mind.

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Further
considera-
tions of im-
portance.

There occurs here another observation of great importance. Since every force is balanced by an equal

force acting in the opposite direction, and since all motion progressive and rotatory is stopped by an external force applied at P in the direction qP , it follows that, if the body were at rest, and the same force be applied there, it will set the body in rotation round the axis Dd , in the opposite direction, with the same angular velocity, and without any pressure on the pivots D and d . For whatever motion of the particle A , in the direction AL , was stopped by a part of the external force applied at P , the same motion will be produced by it in the quiescent particle A in the opposite direction LA . And as the pivots D and d had no motion in the case of the body turning round them, they will acquire no motion, or will have no tendency to motion, or no pressure will be exerted on them, in the last case. Therefore when an external force is applied at P in a direction perpendicular to the line Pp , the line Dd will become a momentary spontaneous axis of conversion, and the incipient motion of the body will perfectly resemble the rotation of the same body round a fixed axis Dd .

There is another set of forces of which we have as yet taken no notice, viz. that part of each force AL which is directed along the plane DCG , and is represented by lL when the whole force is represented by AL , or by A/l when the whole force is represented by Aa . These forces being all in the plane DCG , and in the direction CG or GC , can have no effect on the rotation round any axis in that plane. But they tend, separately, to produce rotation round any axis passing through this plane perpendicularly. And the momentum of A to produce a rotation round an axis perpendicular to this plane, in O for instance, must evidently be $A.A/l.nO$, and round P it must be $A.A/l.nP$, &c. We shall have occasion to consider these afterwards.

It is usual in courses of experimental philosophy to illustrate the motions of bodies on inclined planes and curved surfaces by experiments with balls rolling down these surfaces. But the motions of such rolling balls are by no means just representations of the motions they represent. The ball not only goes down the inclined plane by the action of gravity, but it also turns round an axis. Force is necessary for producing this rotation; and as there is no other source but the weight of the ball, part of this weight is expended on the rotation, and the remainder only accelerates it down the plane. The point of the ball which rests on the plane is hindered from sliding down by friction; and therefore the ball tumbles, as it were, over this point of contact, and is instantly caught by another point of contact, over which it tumbles in the same manner. A cylinder rolls down in the very same way; and its motion is nearly the same as if a fine thread had been lapped round it, and one end of it made fast at the head of the inclined plane. The cylinder rolls down by unwinding this thread.

The mechanism of all such motions (and some of them are important) may be understood by considering them as follows: Let a body of any shape be connected with a cylinder FCB (fig. 6.) whose axis passes through G the centre of gravity of the body. Suppose that body suspended from a fixed point A by a thread wound round the cylinder. This body will descend by the action of gravity, and it will also turn round, unwinding the thread. Draw the horizontal

Rotation.

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Of balls and
cylinders
rolling
down in-
clined
planes.

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Mechanism
of these
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line

Rotation. line OGC. It will pass through the point of contact C of the thread and cylinder, and C is the point round which it begins to turn in descending. Let O be its centre of oscillation corresponding to the momentary centre of rotation C. It will begin to descend in the same manner as if all its matter were collected in O: for it may be considered, in this instant, as a pendulum suspended at C. But in this case O will descend in the same manner as if the body were falling freely. Therefore the velocity of G (that is, the velocity of descent) will be to the velocity with which a heavy body would fall as CG to CO. Now since the points C, G, O, are always in a horizontal line, and the radius CG is given; as also CO (n° 48.) the velocity of a body falling freely, and of the body unwinding from this thread, will always be in the same proportion of CO to CG, and so will the spaces described in any given time. And thus we can compare their motions in every case when we know the place of the centre of oscillation.

60 **Cor. 1.** The weight of the descending body will be to the tension of the thread as CO to GO: for the tension of the thread is the difference between the momentum of the rolling body and that of the body falling freely.

Observe, that this proportion between the weight of the body and the tension of the thread will be always the same: for it has been demonstrated already, n° 42. that if C be in the circumference of a circle whose centre is G, O will be in the circumference of another circle round the same centre, and therefore the ratio of CG to CO is constant.

61 **Cor. 2.** If a circular body FCB roll down an inclined plane by unfolding a thread, or by friction which prevents all sliding, the space described will be to that which the body would describe freely as CG to CO: for the tendency down the inclined plane is a determined proportion of the weight of the body. The motion of rotation in these cases, both progressive and whirling, is uniformly accelerated.

62 **Case of pendulous bodies.** Something of the same kind obtains in common pendulous bodies. A ball hung by a thread not only oscillates, but also makes part of a rotation; and for this reason its oscillations differ from those of a heavy point hanging by the same thread, and the centre of oscillation is a little below the centre of the ball. A ball hung by a thread, and oscillating between cycloidal cheeks, does not oscillate like a body in a cycloid, because its centre of oscillation is continually shifting its place. Huyghens avoided this by suspending his pendulous body from two points, so that it did not change its attitude during its oscillation. If our spring-carriages were hung in this manner, having the four lower staples to which the straps are fixed as far asunder as the four upper staples at the ends of the springs, the body of the carriage would perform its oscillations without kicking up and down in the disagreeable manner they now do, by which we are frequently in danger of striking the glasses with our heads. The swings would indeed be greater, but incomparably easier; and we could hold things almost as steadily in our hand as if the carriage were not swinging at all.

This will suffice for an account of the rotation round fixed axes, as the foundation for a theory of machines actually performing work. The limits of our under-

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taking will not allow us to do any more than just point out the method of applying it.

Let there be any machine of the rotatory kind, i. e. composed of levers or wheels, and let its construction be such, that the velocity of the point to which the power is applied (which we shall call the *impelled point*) is to the velocity of the working point in the ratio of m to n . It is well known that the energy of this machine will be the same with that of an axis in peritrochio, of which the radii are m and n .

Let p express the actual pressure exerted on the impelled point by the moving power, and let r be the actual pressure or resistance exerted on the working point by the work to be performed. Let x be the inertia of the power, or the quantity of dead matter which must move with the velocity of the impelled point in order that the moving power may act. Thus the moving power may be the weight of a bucket of water in a water-wheel; then x is the quantity of matter in this bucket of water. Let y in like manner be the inertia of the work, or matter which must be moved with the velocity of the working-point, in order that the work may be performed. Thus y may be a quantity of water which must be continually pushed along a pipe. This is quite different from the weight of the water, though it is proportional to it, and may be measured by it.

Let f be a pressure giving the same resistance when applied at the working-point with the friction of the machine, and let an^2 be the momentum of the machine's inertia, viz. the same as if a proper quantity of matter a were attached to the working-point, or to any point at the same distance from the axis.

This state of things may be represented by the wheel and axle PQS (fig. 7.) where x and y and a are represented by weights acting by lines. P is the impelled point, and R the working-point; CP is m and CR is n . The moving force is represented by PA, the resistance by RB, and the friction by BF.

It is evident that the momentum of the inertia of x , y , and a are the same as if they were for a moment attached to the points P and R.

Hence we derive the following expressions,

$$1. \text{ The angular velocity } = \frac{pm - r + fn}{xm^2 + y + an^2}.$$

$$2. \text{ Velocity of the working-point } = \frac{pmn - r + fn^2}{xm^2 + y + an^2}.$$

$$3. \text{ Work performed } = \frac{pmnr - r + fn^2r}{xm^2 + y + an^2}.$$

For the work is proportional to the product of the resistance and the velocity with which it is overcome.

We shall give a very simple example of the utility of these formulæ. Let us suppose that water is to be raised in a bucket by the descent of a weight, and that the machine is a simple pulley. Such a machine is described by Desaguliers*, who says he found it preferable to all other machines. The bucket dipped itself in the cistern. A chain from it went over a pulley, and at its extremity was a stage on which a man could step from the head of a stair. His preponderance brought down the stage and raised the bucket, which discharged its water into another cistern. The man quit-
ted the stage, and walked up stairs, and there he found

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Formulæ,
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tice.

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* Exper.
Phil. vol.
ii. p. 503.

Rotation. it ready to receive him, because the empty bucket is made heavier than the empty stage.

Now, if there be no water in the bucket, it is evident, that although the motion of the machine will be the quickest possible, there will be no work performed. On the other hand, if the loaded stage and the full bucket are of equal weight, which is the usual statement of such a machine in elementary treatises of mechanics, the machine will stand still, and no work will be performed. In every intermediate state of things the machine will move, and work will be performed. Therefore the different values of the work performed must be a series of quantities which increase from nothing to a certain magnitude, and then diminish to nothing again. The maxim which is usually received as a fundamental proposition in mechanics, viz. that what is gained in force by the intervention of a machine is lost in time, is therefore false. There must be a particular proportion of the velocities of the impelled and working-points, which will give the greatest performance when the power and resistance are given; and there is a certain proportion of the power and resistance which will have the same effect when the structure of the machine has previously fixed the velocities of the impelled and working points.

67 This proportion will be found by treating the formula which expresses the work as a fluxionary quantity, and finding its maximum. Thus, when the ratio of the power and resistance is given, and we wish to know what must be the proportion of the velocities m and n , that we may construct the machine accordingly, we have only to consider n as the variable quantity in the third formula. This gives us

$$n = m \times \frac{\sqrt{x^2 \times r + f^2 + p^2 \times a + y} - x r + f}{p a + y}$$

68 This is a fundamental proposition in the theory of working machines: but the application requires much attention. Some natural powers are not accompanied by any inertia worth minding; in which case x may be omitted. Some works, in like manner, are not accompanied by any inertia; and this is a very general case. In many cases the work exerts no contrary strain on the machine at rest, and r is nothing. In most instances the intensity of the power varies with the velocity of the impelled point, and is diminished when this increases; the resistance or actual pressure at the working point frequently increases with the velocity of the working-point. All these circumstances must be attended to; but still they only modify the general proposition. These are matters which do not come within the limits of the present article. We only took this opportunity of showing how imperfect is the theory of machines in equilibrio for giving us any knowledge of their performance or just principles of their construction.

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Common
mode of
estimating
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impulsions,

One thing, however, must be particularly attended to in this theory. The forces which are applied to the body moveable round an axis are considered in the theory as pressures actually exerted on the impelled points of the body or machine, as when a weight is appended to a lever or wheel and axle, and, by descending uniformly, acts with its whole weight. In this case the weight multiplied by its distance from the axis will always express its momentum, and the rotation will (ca-

teris paribus) be proportional to this product. But in many important cases our machines are actuated by external impulsions. A body in motion strikes on the impelled point of the machine, and causes it to turn round its axis. It is natural for us to consider the quantity of motion of this impelling body as the measure of our moving force. Supposing n to be its quantity of matter, and V its velocity, nV appears a very proper measure of its intensity. And if it be applied at the distance CP from the axis of rotation, $nV \cdot CP$ should express its energy, momentum, or power to turn the machine round C ; and we should express the angular velocity by $\frac{nV \cdot CP}{\int p r^2}$. Accordingly, this is the manner in which calculations are usually made for the construction and performance of the machine, as may be seen in almost every treatise of mechanics.

But nothing can be more erroneous, as we shall show by a very simple instance. It should result from these principles that the angular velocity will be proportional to CP . Let us suppose our moving power to be a stream of water moving at the rate of ten feet per second, and that every second there passes 100 pounds of water. We should then call our moving force 1000. It is evident, that if we suppose the arm of the float-board on which it strikes to be infinitely long, the impelled point can never move faster than 10 feet in a second, and this will make the angular velocity infinitely small, instead of being the greatest of all. The rotation will therefore certainly be greater if CP be shorter. We need not examine the case more minutely.

We must therefore carefully distinguish between the quantity of motion of the impelling body and its moving power, as it is modified by its manner of acting. The moving power is the pressure actually exerted on the impelled point of the machine. Now the universal fact of the equality of action and reaction in the collision of bodies assures us, that their mutual pressure in their collision is measured by the change of motion which each sustains: for this change of motion is the only indication and measure of the pressure which we suppose to be its cause. A way therefore of ascertaining what is the real moving force on a machine actuated by the impulsion of a moving body, is to discover what quantity of motion is lost by the body or gained by the machine; for these are equal. Having discovered this, we may proceed according to the propositions of rotatory motion.

Therefore let AEF (fig. 8.) represent a body moveable round an axis passing through C , perpendicular to the plane of the figure. Let this body be struck in the point A by a body moving in the direction FA , and let BAD be a tangent to the two bodies in the point of collision. It is well known that the mutual actions of two solid bodies are always exerted in a direction perpendicular to the touching surfaces. Therefore the mutual pressure of the two bodies is in the direction AP perpendicular to AD . Therefore let the motion of the impelling body be resolved into the directions AP and AD . The force AD has no share in the pressure. Therefore let V be the velocity of the impelling body estimated in the direction AP , and let n be its quantity of matter. Its quantity of motion in the direction AP will be nV .

Did AP pass through C , it is evident that the only effect

Rotation. effect would be to press the axis on its supports. But AP, the direction of the pressure, being inclined to AC, the point A is forced aside, and in some small moment of time describes the little arch Aa round the centre C. The point P will therefore describe a small arch Pp, subtending an angle PCp=ACa. Draw ao perpendicular to AP, and ad perpendicular to AD. The triangles dAo, ACP are similar, and Aa: Ao=AC: CP. But the angles ACa, PCp being equal, the arches are as their radii, and Aa: Pp=AC: CP, =Aa: Ao; therefore p=Ao.

Now since, in consequence of the impulse, A describes Aa in the moment of time, it is plain that Ao is the space through which the impelling body continues to advance in the direction of the pressure; and if V be taken equal to the space which it described in an equal moment before the stroke, v will express the remaining velocity, and V-v is the velocity lost, and n(V-v) is the quantity of motion lost by the impelling body, and is the true measure of the pressure exerted. This gives us the whole circumstances of the rotatory motion. The

angular velocity will be $\frac{n(V-v) \cdot CP}{\int p r^2}$, and the velocity of the point A will be $\frac{n(V-v) \cdot CP \cdot CA}{\int p r^2}$. Call this velocity u. The similarity of triangles gives us CA: CP=Aa (or u): Ao (or v) and $u = \frac{v \cdot CA}{CP}$. There-

fore $\frac{V \cdot CA}{CP} = \frac{n(V-v) \cdot CP \cdot CA}{\int p r^2}$. From this we deduce

$v = \frac{n \cdot V \cdot CP^2}{\int p r^2 + n \cdot CP^2}$, and thus we have obtained the va-

lue of v in known quantities; for n was given, or supposed known; so also was V: and since the direction FA was given, its distance CP from the axis is given; and the form of the body being known, we can find the value of $\int p r^2$. Now we have seen that v is also the velocity of the point P; therefore we know the absolute velocity of a given point of the body or machine, and consequently the whole rotatory motion.

73 We have the angular velocity = $\frac{n \cdot V \cdot CP}{\int p r^2 + n \cdot CP^2}$: we shall find this a maximum when $\int p r^2 = n \cdot CP^2$; and in this case $CP = \sqrt{\frac{\int p r^2}{n}}$, and $v = \frac{1}{2}V$. So that the greatest velocity of rotation will be produced when the striking body loses $\frac{1}{2}$ of its velocity.

74 Authors treating of the application of that theory recommended. What we have now delivered is sufficient for explaining all the motions of bodies turning round fixed axes; and we presume it to be agreeable to our readers, that we have given the investigation of the centres of gyration, oscillation, and percussion. The curious reader will find the application of these theorems to the theory of machines in two very valuable dissertations by Mr Euler in the Memoirs of the Academy of Berlin, vols viii. and x. and occasionally by other authors who have treated mechanics in a scientific and useful manner, going beyond the school-boy elements of equilibrium.

75 Of the rotation of free bodies. There remains a very important case of the rotation of bodies, without which the knowledge of the motion of solid bodies is incomplete; namely, the rotation of free bodies, that is, of bodies unconnected with any fixed points. We hardly see an instance of motion of a

Rotation. free body without some rotation. A stone thrown from the hand, a ball from a cannon, the planets themselves, are observed not only to advance, but also to whirl round. The famous problem of the precession of the equinoxes depends for its solution on this doctrine; and the theory of the working of ships has the same foundation. We can only touch on the leading propositions.

We need not begin, by demonstrating, that when the direction of the external force passes through the centre of the body, the body will advance without any rotation. This we consider as familiarly known to every person versant in mechanics; nor is it necessary to demonstrate, that when the direction of the moving force does not pass through the centre of gravity, this centre will still advance in a direction parallel to that of the moving force, and with the same velocity as if the direction of the moving force had passed through it. This is the immediate consequence of the equality of action and reaction observed in all the mechanical phenomena of the universe.

But it is incumbent on us to demonstrate, that when the direction of the moving force does not pass thro' the centre of gravity, the body will not only advance in the direction of the moving force, but will also turn round an axis, and we must determine the position of this axis, and the relation subsisting between the progressive and rotatory motions.

The celebrated John Bernoulli was the first who considered this subject; and, in his *Disquisitiones Mechanico-dynamicae*, he has demonstrated several propositions concerning the spontaneous axis of conversion, and the motions arising from eccentric external forces: and although he assumed for the leading principle a proposition which is true only in a great number of cases, he has determined the rotation of spherical bodies with great accuracy.

This combination of motions will be palpable in some simple cases, such as the following: Let two equal bodies A and B (fig. 9.) be connected by an inflexible rod (of which we may neglect the inertia for the present). Let G be the middle point, and therefore the centre of gravity. Let an external force act on the point P in the direction FP perpendicular to AB, and let AP be double of PB. Also let the force be such, that it would have caused the system to have moved from the situation AB to the situation ab, in an indefinitely small moment of time, had it acted immediately on the centre G. G would in this case have described Gg, A would have described Aa, and B would have described Bb, and ab would have been parallel to AB: for the force impressed on A would have been equal to the force impressed on B; but because the force acts on P, the force impressed on A is but one half of that impressed on B by the property of the lever: therefore the initial motion or acceleration of A will be only half of the initial motion of B; yet the centre G must still be at g. We shall therefore ascertain the initial motion of the system, by drawing through g a line agb, so that Aa shall be $\frac{1}{2}$ of Bb. This we shall do by making AC=AB, and drawing Cagb. Then agb will be the position of the system at the end of the moment of time. Thus we see that the body must have a motion of rotation combined with its progressive motion.

Rotation.

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How motion is performed in these cases,

And we deduce immediately from the premises that this rotation is performed round an axis passing through the centre of gravity G : for since the centre describes a straight line, it is never either above or below the axis of rotation, and is therefore always in it. This is a fundamental theorem, and our subsequent investigation is by this means greatly simplified, being thus reduced to two problems: 1. To determine in what direction the axis passes through the centre of gravity. 2. To determine the angular velocity of the rotation, or how far the centre must advance while the body makes one turn round the axis. This establishes the relation between the progressive and rotatory motions. It will contribute to our better conception of both these problems to see the result in the present simple case.

29

It is evident, in the first place, that the impressions made on A and B are in lines Aa , Bb parallel to FP and Gg ; and therefore the motions of the points A , G , and B , are made in one plane, viz. the plane FPG . The axis of rotation therefore must be a line drawn through G , perpendicular to this plane. If we give it any other position, one of the points A , B , or both of them, must quit this plane.

In the next place, in ba produced take $bc = BC$. Then supposing AC to be a rigid line connected with the system, it is evident that if there had been no rotation, the line BC would have kept parallel to its first position, and that at the end of the moment of time C would have been at c . The point C therefore has had, by the rotation, a backward motion cC , relative to the centre G or g , and this motion is equal to the progressive motion Gg of the centre; therefore if we make $G\gamma$ equal to the circumference of a circle whose radius is CG , the body will make one rotation round the centre of gravity, while this centre moves along $G\gamma$; and thus the relation is established between the two motions.

30

But farther, the point C has, in fact, not moved out of its place. The incipient motion has therefore been such, that C has become a spontaneous centre of conversion. It is easy to see that this must always be the case, whatever may be the form of the rigid body or system of particles connected by inflexible and inextensible lines. Since the system both advances and turns round an axis passing through its centre of gravity, there must be some point in the system, or which may be conceived as connected with it by an inflexible line, which moves backward, by the rotation, as fast as the centre advances forward. A line drawn through this point parallel to the axis must in this instant be at rest, and therefore must be a spontaneous axis of conversion. And, in this instant, the combined motions of rotation round an axis passing through the centre of gravity and the motion of progression, are equivalent to, and actually constitute, an incipient simple motion of rotation round another axis parallel to the former, whose position may be ascertained. But it is necessary to establish this proposition and its converse on clearer evidence.

31

Therefore let G (fig. 10.) be the centre of gravity of a rigid system of particles of matter, such as we suppose a solid body to be. Let this system be supposed to turn round the axis Gg , while the axis itself is moving forward in the direction and with the velocity GI . Let the rotation be such, that a particle A has the direction and velocity Ah . Let us first suppose the progressive mo-

tion GI to be perpendicular to the axis Gg . It will therefore be parallel to the planes of the circles described round the axis by the different particles. Let CGg be a plane perpendicular to GI . It will cut the plane of the circle described by A in a straight line cg , and g will be the centre round which A is turning. Therefore Ag will be the radius vector of A , and Ah is perpendicular to Ag . Let Ad be perpendicular to cg , and in Ad take Ae equal to GI or gi . It is evident, that the absolute motion of A is compounded of the motions Ae and Ah , and is the diagonal Af of the parallelogram $Aefb$. In the line gc , which is perpendicular to Gg , take gc to gA , as Ae to Ah , and draw cC parallel to gG , and produce bA till it cut cg in n . We say that Cc is in this moment a spontaneous axis of conversion; for, because An is perpendicular to Ag and Ad to Cg , the angle cgA is equal to dAn , or fbA . Therefore, since $cg:gA = fb:bA$, the triangles cgA and fbA are similar, and the angle gAc is equal to bAf . Take away the common angle gAf , and the remaining angle cAf is equal to the remaining angle bAg , and Af is perpendicular to Ac , and the incipient motion of A is the same in respect of direction as if it were turning round the axis cC . Moreover, Af is to fb or gi as Ac to cg . Therefore, both the direction and velocity of the absolute motion of A is the same as if the body were turning round the fixed axis cC ; and the combined motion Ae of progression, and the motion Ah of rotation round Gg , are equivalent to, and really constitute, a momentary simple motion of rotation round the axis Cc given in position, that is, determinable by the ratio of Ae to Ah .

On the other hand, the converse proposition is, that a simple motion of rotation round a fixed axis Cc , such that the centre G has the velocity and direction GI perpendicular to CG , is equivalent to, and produces a motion of rotation round an axis Gg , along with the progressive motion GI of this axis. This proposition is demonstrated in the very same way, from the consideration that, by the rotation round Cc , we have $cA:cg = cf:gi$. From this we deduce, that Ah is perpendicular to Ag , and that $fb:Ah = cg:gA$; and thus we resolve the motion Af into a motion Ah of rotation round Gg , and a motion Ae of progression common to the whole body.

But let us not confine the progressive motion to the direction perpendicular to the axis Gg . Let us suppose that the whole body, while turning round Gg , is carried forward in the direction and with the velocity GK . We can always conceive a plane LGC , which is perpendicular to the plane in which the axis Gg and the direction GK of the progressive motion are situated — and the motion GK may be conceived as compounded of a motion GI perpendicular to this plane and to the axis; and a motion of translation GL , by which the axis slides along in its own direction. It is evident, that in consequence of the first motion GI , there arises a motion of rotation round Cc . It is also evident, that if, while the body is turning for a moment round Cc , this line be slid along itself in the direction cC , a motion equal to GL will be induced on every particle A , and compounded with its motion of rotation Af , and that if fj be drawn equal and parallel to GL , j will be the situation of the particle A when G is in K .

And thus it appears, that when the progressive mo-

Rotation.

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Rotation. tion is perpendicular to the axis of rotation passing through the centre of gravity, the two motions progressive and rotatory are equivalent to a momentary simple motion of rotation round a spontaneous axis of conversion, which is at rest: but when the progressive motion is inclined to the axis passing thro' the centre, the spontaneous axis of conversion is sliding in its own direction.

85
Exempli-
fied.

We may conceive the whole of this very distinctly and accurately by attending to the motion of a garden roller. We may suppose it six feet in circumference, and that it is dragged along at the rate of three feet in a second from east to west, the axis of the roller lying north and south. Suppose a chalk line drawn on the surface of the roller parallel to its axis. The roller will turn once round in two seconds, and this line will be in contact with the ground at the intervals of every six feet. In that instant the line on the roller now spoken of is at rest, and the motion is the same as if it were fixed, and the roller really turning round it. In short, it is then a spontaneous axis of conversion.

Now, suppose the roller dragged in the same manner and in the same direction along a sheet of ice, while the ice is floating to the south at the rate of four feet in a second. It is now plain that the roller is turning round an axis through its centre of gravity, while the centre is carried in the direction $36^{\circ} 52' W.$ at the rate of five feet *per* second. It is also plain, that when the line drawn on the surface of the stone is applied to the ice, its only motion is that which the ice itself has to the southward. The motion is now a motion of rotation round this spontaneous axis of conversion, compounded with the motion of four feet *per* second in the direction of this axis. And thus we see that any complication of motion of rotation round an axis passing through the centre of gravity, and a motion of progression of that centre, may always be reduced to a momentary or incipient motion of rotation round another axis parallel to the former, compounded with a motion of that axis in its own direction.

85 The demonstration which we have given of these two propositions points out the method of finding the axis C , the incipient rotation round which is equivalent to the combined progressive motion of the body, and the rotation round the axis Gg . We have only to note the rotatory velocity Ab of some particle A , and its distance Ag from the axis, and the progressive velocity GI of the whole body, and then to make GC a fourth proportional to Ab , GI , and gA , and to place GC in a plane perpendicular to GI , which is perpendicular to Gg , and to place C on that side of Gg which is moving in the opposite direction to the axis.

86 In the simple case of this problem, which we exhibited in order to give us easy and familiar notions of the subject, it appeared that the retrograde velocity of rotation of the point C was equal to the progressive velocity of the centre. This must be the case in every point of the circumference of the circle of which CG , fig. 9. is the radius. Therefore, as the body advances, and turns round G , this circle will apply itself in succession to the line CK parallel to G ; and any individual point of it, such as C , will describe a cycloid of which this circle is the generating circle, CK the base, and CG half the altitude. The other points of the body will describe trochoids, elongated or contracted according as the describing points are nearer to or more remote from G than the point C is.

It is now evident that all this must obtain in every case, as well as in this simple one. And when we have ascertained the distance GC between the axis of rotation passing through the centre, and the momentary spontaneous axis of conversion passing through C , we can then ascertain the relation between the motions of rotation and progression. We then know that the body will make one rotation round its central axis, while its centre moves over a space equal to the circumference of a circle of a known diameter.

87
The appli-
cation
made to
more com-
plex cases.

We must therefore proceed to the methods for determining the position of the point C . This must depend on the proportion between the velocity of the general progressive motion, that is, the velocity of the centre, and the velocity of some point of the body.— This must be ascertained by observation. In most cases which are interesting, we learn the position of the axis, the place of its poles, the comparative progressive velocity of the centre, and the velocity of rotation of the different points, in a variety of ways; and it would not much increase our knowledge to detail the rules which may be followed for this purpose. The circumstance which chiefly interests us at present is to know how these motions may be produced; what force is necessary, and how it must be applied, in order to produce a given motion of rotation and progression; or what will be the motion which a given force, applied in a given manner, will produce.

We have already given the principles on which we may proceed in this investigation. We have shown the circumstances which determine the place of the centre of percussion of a body turning round a given fixed axis. This centre of percussion is the point of the body where all the inherent forces of the whirling body precisely balance each other, or rather where they unite and compose one accumulated progressive force, which may then be opposed by an equal and opposite external force. If, therefore, the body is not whirling, but at rest on this fixed axis, and if this external force be applied at the centre of percussion, now become a *point of impulsion*, a rotation will commence round the fixed axis precisely equal to what had been stopped by this external force, but in the opposite direction; or, if the external force be applied in the direction in which the centre of percussion of the whirling body was moving at the instant of stoppage, the rotation produced by this impulse will be the same in every respect. And we found that in the instant of application of this external force, either to stop or to begin the motion, no pressure whatever was excited on the supports of the axis, and that the axis was, in this instant, a spontaneous axis of conversion.

Moreover, we have shown, art. 84, that a rotation round any axis, whether fixed or spontaneous, is equivalent to, or compounded of, a rotation round another axis *parallel to it*, and passing through the centre of gravity, and a progressive motion in the direction of the centre's motion at the instant of impulse.

Now, as the position of the fixed axis, and the known disposition of all the particles of the body with respect to this axis, determines the place of the centre of percussion, and furnishes all the mathematical conditions which must be implemented in its determination, and the direction and magnitude of the force which is produced and exerted at the centre of percussion; so, on the other hand, the knowledge of the magnitude and direction

Rotation. direction of an external force which is exerted on the point of impulsion of a body not connected with any fixed axis, and of the disposition of all the parts of this body with respect to this point of impulsion, will furnish us with the mathematical circumstances which determine the position of the spontaneous axis of conversion, and therefore determine the position of the axis through the centre (parallel to the spontaneous axis of conversion), round which the body will whirl, while its centre proceeds in the direction of the external force.

89
Mode of determining the axis of progressive rotation the converse of that for determining the centre of percussion.

The process, therefore, for determining the axis of progressive rotation is just the converse of the process for determining the centre of percussion.

John Bernoulli was the first who considered the motion of free bodies impelled by forces whose line of direction did not pass through their centre of gravity; and he takes it for granted, that since the body both advances and turns round an axis passing through the centre of gravity, this axis is perpendicular to the plane passing through the direction of the force, and through the point of impulsion and the centre of gravity. Other authors of the first name, such as Huyghens, Leibnitz, Roberval, &c. have thought themselves obliged to demonstrate this. Their demonstration is as follows:

Let a body whose centre of gravity is G (fig. 11.) be impelled at the point P by a force acting in the direction PQ not passing through the centre. The inertia of the whole body will resist in the same manner as if the whole matter were collected in G , and therefore the resistance will be propagated to the point P in the direction GP . The particle P , therefore, is impelled in the direction PQ , and resisted in the direction PA , and must therefore begin to move in some direction PB , which makes the diagonal of a parallelogram of which the sides have the directions PQ and PA . The diagonal and sides of a parallelogram are in one plane. P is therefore moving in the plane $APQB$ or GPQ , and it is turning round an axis which passes through G .—Therefore this axis *must* be perpendicular to the plane GPQ .

90 It would require a series of difficult propositions to show the fallacy of this reasoning in general terms, and to determine the position of the axis through G . We shall content ourselves with a very simple case, where there can be no hesitation. Let A and B (fig. 12.) be two equal balls connected with the axis ab by inflexible lines Aa , Bb , perpendicular to ab . Let Aa be 1, and Bb 2. The centre of gravity G will evidently be in the line cG parallel to Aa and Bb , and in the middle of ab , and cG is $1\frac{1}{2}$. Let O be the centre of oscillation. cO is $= \frac{A \cdot Aa^2 + B \cdot Bb^2}{A + B \cdot cG} = \frac{1}{3}$.

Draw Am , Bn perpendicular to cG , and suppose the balls transferred to m and n . Their centre of oscillation will be still at O ; and we see that if the system in this form were stopped at O , all would be in equilibrio. For the force with which the ball A arrives (by swinging round the axis) at m , is as its quantity of matter and velocity jointly, that is, $A \cdot Aa$, or 1. That of B arriving at n is $B \cdot Bb$, or 2. The arm mO of the lever turning round O is $\frac{2}{3}$, and the arm nO is $\frac{1}{3}$. The forces, therefore, are reciprocally as the arms of the lever on which they act, and their momenta, or powers to turn the line mn round O , are equal and opposite, and therefore balance each other; and therefore, at the

instant of stopping, no pressure is exerted at c . Therefore, if any impulse is made at O , the balls at m and n will be put in motion with velocities 1 and 2, and c will be a spontaneous centre of conversion. Let us see whether this will be the case when the balls are in their natural places A and B , or whether there will be any tendency to a rotation round the axis cO . The momentum of A , by which it tends to produce a rotation round cO is $A \cdot Aa \cdot Am = 1 \times Am$. That of B is $B \cdot Bb \cdot Bn = 2 \times Bn$. Am and Bn are equal, and therefore the momentum of B is double that of A , and there is a tendency of the system to turn round cO ; and if, at the instant of stoppage, the supports of the axis ab were removed, this rotation round cO would take place, and the point b would advance, and a would recede, c only remaining at rest. Therefore, if an impulse were made at O , ab would not become a spontaneous momentary axis of conversion, and O is not the centre of percussion. This centre must be somewhere in the line OP parallel to ab , as at P , and so situated that the momenta $A \cdot Aa \cdot Aa$ and $B \cdot Bb \cdot Bb$ may be equal, or that Aa may be double of Bb , or ap double of bp . If an impulse be now made at P , the balls AB will be urged by forces as 1 and 2, and therefore will move as if round the axis ab , and there will be no pressures produced at a and b , and ab will really become a momentary spontaneous axis of conversion.

Now join G and P . Here then it is evident, that a body or system A, B , receiving an impulse at P perpendicular to the plane acG , acquires to itself a spontaneous axis of conversion which is not perpendicular to the line joining the point of impression and the centre of gravity. And we have shown, in art. 84. that this motion round ab is compounded of a progressive motion of the whole body in the direction of the centre, and a rotation round an axis passing through the centre parallel to ab . Therefore, in this system of free bodies, the axis of rotation is not perpendicular to the plane passing through the centre of gravity in the direction of the impelling force.

As we have already observed, it would be a laborious task to ascertain in general terms the position of the progressive axis of rotation. Although the process is the inverse of that for determining the centre of percussion when the axis of rotation is given, it is a most intricate business to convert the steps of this process. The general method is this: The momentum of a particle A (fig. 5.) by which it tends to change the position of the axis Dd , has for its factors $A \cdot Aa$, and Aa , which are its distances from three planes $Dd\Delta$, $DCOn$, and $Cg\gamma$, given in position. The sum of all these must be equal to nothing, by the compensation of positive and negative quantities. We must find three other planes (of which only one is in some measure determined in position, being perpendicular to $DCOn$), so situated that the sums of similar products of the distances of the particles from them may in like manner be equal to nothing. This is a very intricate problem; so intricate, that mathematicians have long doubted and disputed about the certainty of the solutions. Euler, d'Alembert, Frisi, Landen, and others, have at last proved, that every body, however irregular its shape, has at least three axes passing through its centre of gravity, round which it will continue to revolve

Rotation. volve while proceeding forward, and that these are at right angles to each other; and they have given the conditions which must be implemented in the determination of these axes. But they still leave us exceedingly at a loss for means to discover the positions of the axes of a given body which have these conditions.

To solve this problem therefore in general terms, would lead to a disquisition altogether disproportioned to our work. We must restrict ourselves to those forms of body and situations of the point of impulsion which admit of the coincidence of the centres of oscillation and percussion; and we must leave out the cases where the axis has a motion in the direction of its length; that is, we shall always suppose the spontaneous axis of conversion to have no motion. Thus we shall comprehend the phenomena of the planetary motions, similar to the precession of our equinoctial points; and all the interesting cases of practical mechanics. The speculative mathematical reader will fill up the blanks of this investigation by consulting the writings of Euler and D'Alembert in the Berlin Memoirs, Frisi's Cosmographia, and the papers of Mr Landen, Mr Milner, and Mr Vince, in the Philosophical Transactions. But we hope, by means of a beautiful proposition on the composition of rotatory motions, to enable every reader to discover the position of the axis of progressive rotation in every case which may interest him, without the previous solution of the intricate problem mentioned above.

92
Mode of
ascertaining
it in most
interesting
cases.

Let $ABPCp\beta A$ (fig. 13.) be a section of a body through its centre of gravity G , so formed, that the part $ABPC$ is similar, and similarly placed with the part $A\beta pC$, so that the plane AC would divide it equally. Let this body be impelled at P in the direction HP , perpendicular to the plane AC . The axis round which it will turn will be perpendicular to $G\pi$. Suppose it at A . Then drawing AB and $A\beta$ to similar points, it is plain that $B\beta$, $b\beta$ are equal and opposite; these represent the forces which would raise or lower one end of the axis, as has been already observed. The axis therefore will remain perpendicular to $G\pi$.

93 Let the body be so shaped, that if the parts to the right and left of the point of impulse π (the impulse is here supposed not perpendicular to the plane AC , but in this plane) are equal and similarly placed; then the momenta round AC must balance each other, and the axis EF will have no tendency to go out of the plane $ABC\beta A$ perpendicular to the impulse.

Any body whose shape has these two properties will turn round an axis perpendicular to the plane which passes through the centre of gravity in the direction of the impelling force. This condition is always found in the planets when disturbed by the gravitation to a distant planet: for they are all figures of revolution. The direction of the disturbing or impelling force is always in a plane passing through the axis and the disturbing body.

With such limitations therefore we propose the following problem:

94 Let G (fig. 14.) be the centre of gravity of a body in free space, which is impelled by an external force f , acting in the line FP , which does not pass through the centre. Let m be the number of equal particles in the body, or its quantity of matter. Let the force f be

such, that it would communicate to the body the velocity v ; that is, would cause the centre to move with the velocity v . It may be expressed by the quantity of motion which it produces, that is, by mv , and it would produce the velocity mv on one particle. It is required to determine the whole motion, progressive and rotatory, which it will produce, and the space which it will describe during one turn round its axis.

Draw GI parallel and PGC perpendicular to FP , and let GI be taken for the measure of the progressive velocity v .

It has been demonstrated that the centre G will proceed in the direction GI with the velocity v , and that the body will at the same time turn round an axis passing through G , perpendicular to the plane of the figure, every particle describing circles in parallel planes round this axis, and with velocities of rotation proportional to their distances from it. There is therefore a certain distance GB , such that the velocity with which a particle describes its circumference is equal to the progressive velocity v . Let BCD be this circumference. When the particle describing this circumference is in the line CGP , and in that part of it which lies beyond P from G , its absolute velocity must be double that of the centre G ; but when it is in the opposite point C , its retrograde velocity being equal to the progressive velocity of the centre, it must be at rest. In every position of the body, therefore, that point of the accompanying circumference which is at this extremity of the perpendicular drawn through the centre on the line of direction of the impelling force is at rest. It is at that instant a spontaneous centre of conversion, and the straight line drawn through it perpendicular to the plane of the figure is then a spontaneous axis of conversion, and every particle is in a momentary state of rotation round this axis, in directions perpendicular to the lines drawn to the axis at right angles, and with velocities proportional to these distances; and lastly, the body advances in the direction GI through a space equal to the circumference BCD , while it makes one turn round G .

Let A be one of the particles in the plane of the figure. Join AC , AG , AP . Draw Ab , Ac , Ad perpendicular to CP , CA , GA . The absolute motion Ac of A is compounded of the progressive motion Ab common to the whole body and equal to GI , and the motion Ad of rotation round the centre of gravity G . Therefore since Ab is equal to v , and Ac is the diagonal of a parallelogram given both in species and magnitude, it is also given, and (as appears also from the reasoning in art. 85.) it is to GI as CA to CG .

By the application of the force mv in the direction FP , every particle of the body is dragged out of its place, and exerts a resistance equal to the motion which it acquires. A part of this force, which we may call mv , is employed in communicating the motion Ac to A . Therefore mv , which we have, and, from what has been lately shown, $CG : CA = GI : Ac, = v : Ac$, and therefore $Ac = \frac{v \cdot CA}{CG}$. But farther (agreeably to what was demonstrated in art. 16.) we have $CP : CA = \frac{v \cdot CA}{CG} : mv$, and therefore $mv = \frac{v \cdot CA^2}{CG \cdot CP}$.

Rotation.

Rotation. $\frac{v.CA^2}{CG.CP}$. Therefore the whole force employed in communicating to each particle the motion it really acquires, or $m v$, is equal to the fluent of the quantity $\frac{v.CA^2}{CP.CG}$ or $m v = \frac{v.CA^2}{CP.CG}$, and $m.CP.CG = fCA^2$, which by art. 23. is equal to $fGA^2 + m.CG^2$. Therefore we have $m.CP.CG - m.CG.CG = fGA^2$, or $m.GP.CG = fGA^2$, and finally, $CG = \frac{fGA^2}{m.GP}$.

Now the form of the body gives us fGA^2 , and the position of the impelling force gives us $m.GP$. Therefore we can compute the value of CG ; and if π be the periphery of a circle whose radius is unity, we have $\pi.CG$ equal to the space which the body must describe in the direction GI , while it makes one rotation round its axis.

97 *Cor. 1.* The angular velocity, that is, the number of turns or the number of degrees which one of the radii will make in a given time, is proportional to the impelling force: for the length of CG depends only on the form of the body and the situation of the point of impulsion; while the time of describing π times this length is inversely as the force.

98 2. The angular velocity with any given force is as GP : for CG , and consequently the circumference $\pi.CG$, described during one turn, is inversely as GP .

99 3. PC is equal to $\frac{fPA^2}{m.GP}$: for we have $fPA^2 = fGA^2 + m.GP^2$. Therefore $\frac{fPA^2}{m.GP} = \frac{fGA^2}{m.GP} + \frac{m.GP^2}{m.GP} = CG + GP = CP$.

100 4. If the point C is the centre of impulsion of the same body, P will be a spontaneous centre of conversion (see art. 41).

101 5. A force equal and opposite to $m v$, or to f , applied at G , will stop the progressive motion, but will make no change in the rotation; but if it be applied at P , it will stop all motion both progressive and rotatory. If applied between P and G , it will stop the progressive motion, but will leave some motion of rotation. If applied beyond P it will leave a rotation in the opposite direction. If applied beyond G , or between G and C , it will increase the rotation. All this will be easily conceived by reflecting on its effect on the body at rest.

102 6. A whirling body which has no progressive motion cannot have been brought into this state by the action of a single force. It may have been put into this condition by the simultaneous operation of two equal and opposite forces. The equality and opposition of the forces is necessary for stopping all progressive motion. If one of them has acted at the centre, the rotatory motion has been the effect of the other only. If they have acted on opposite sides, they conspired with each other in producing the rotation; but have opposed each other if they acted on opposite sides.

In like manner, it is plain that a motion of rotation, together with a progressive motion of the centre in the direction of the axis, could not have been produced by the action of a single force.

7. When the space S which a body describes during one rotation has been observed, we can discover the point of impulse by which a single force may have acted in producing both the motions of progression and rotation: for $CG = \frac{S}{\pi}$, and $GP = \frac{fGA^2}{m.CG} = \frac{\pi fGA^2}{m.S}$.

In this manner we can tell the distances from the centre at which the sun and planets may have received the single impulses which gave them both their motions of revolution in their orbits and rotation round their axes.

It was found (art. 40. *f*) that the distance OG of the centre of oscillation or percussio of a sphere swinging round the fixed point C from its centre G , is $\frac{2}{3}$ of the third proportional to CG , and the radius of the sphere, or that $OG = \frac{2}{3} \frac{RG^2}{CG}$. Supposing the

planets to be homogeneous and spherical, and calling the radius of the planet r , and the radius of its orbit R , the time of a rotation round its axis t , and the time of a revolution in its orbit T , and making $1 : \pi$ the ratio of radius to the periphery of a circle, we shall have πR for the circumference of the orbit, and $\pi R \frac{t}{T}$ for the arch of this circumference described during one rotation round the axis. This is S in the above-mentioned formula. Then, diminishing this in the ratio of the circumference to radius, we obtain $CG = R \frac{t}{T}$

and $OG = \frac{2}{3} \frac{r^2}{CG} = \frac{2}{3} \frac{T r^2}{t R}$. This is equivalent to $\frac{\pi fGA^2}{m.S}$, and easier obtained.

This gives us $G v$

For the Earth	$= \frac{r}{157}$	} nearly.
Moon	$\frac{r}{555}$	
Mars	$\frac{r}{195}$	
Jupiter	$\frac{r}{2,8125}$	
Saturn	$\frac{r}{2,588}$	

We have not data for determining this for the sun. But the very circumstance of his having a rotation in $27^d 7^h 47'$ makes it very probable that he, with all his attending planets, is also moving forward in the celestial spaces, perhaps round some centre of still more general and extensive gravitation: for the perfect opposition and equality of two forces, necessary for giving a rotation without a progressive motion, has the odds against it of infinity to unity. This corroborates the conjectures of philosophers, and the observations of Herschel and other astronomers, who think that the solar system is approaching to that quarter of the heavens in which the constellation Aquila is situated.

8. As in the communication of progressive motion among bodies, the same quantity of motion is preserved before and after collision, so in the communication of rotation

Rotation. tation among whirling bodies the quantity of rotatory momentum is preserved. This appears from the general tenor of our formulæ: for if we suppose a body turning round an axis passing through its centre, without any progressive motion, we must suppose that the force mv , which put it in motion, has been opposed by an equal and opposite force. Let this be supposed to have acted on the centre. Then the whole rotation has been the effect of the other acting at some distance GP from the centre. Its momentum is $mv.GP$. Had it acted alone, it would have produced a rotation compounded with a progressive motion of the centre with the velocity v ; and the body acquires a momentary spontaneous axis of conversion at the distance GC from the centre of gravity. The absolute velocity AC of any particle is $\frac{v.AC}{CG}$; its momentum is $\frac{v.AC^2}{GC}$, and the sum of all the momenta is $\frac{\int v.AC^2}{CG}$, or $\frac{v \int AC^2}{CG}$, and this is equal to $mv.GP$. But when the progressive motion is stopped, Ab , which was a constituent of the absolute motion of A , is annihilated, and nothing remains but the motion Ad of rotation round G . But the triangles dAc and GAC were demonstrated (no 81.) to be similar; and therefore $AC:Ad = CA:GA$. Therefore the absolute velocity of the particle, while turning round the quiescent centre of gravity G , is $\frac{v.GA}{GC}$; its momentum is $\frac{v.GA^2}{GC}$; the sum of all the momenta is $\frac{v \int GA^2}{GC}$; and this is still equal to mv . Observe, that now GC is not the distance of the centre of conversion from the centre of gravity, because there is now no such thing as the spontaneous axis of conversion, or rather it coincides with the axis of rotation. GC is the distance from the centre of a particle whose velocity of rotation is equal to v .

Now let the body be changed, either by a new distribution of its parts, or by an addition or abstraction of matter, or by both; and let the same force mv act at the same distance GP from the centre. We shall still have $mv.GP = \frac{v \int GA^2}{GC}$; and therefore the sum of the momenta of the particles of the whirling body is still the same, viz. equal to the momentum of the force mv acting by the lever GP. If therefore a free body has been turning round its centre of gravity, and has the distribution of its parts suddenly changed (the centre however remaining in the same place), or has a quantity of matter suddenly added or taken away, it will turn with such an angular velocity that the sum of the momenta is the same as before.

107 Application to the problem of the precession of the equinoxes. We have been so particular on this subject, because it affects the celebrated problem of the precession of the equinoxes; and Sir Isaac Newton's solution of it is erroneous on account of his mistake in this particular. He computes the velocity with which a quantity of matter equal to the excess of the terrestrial spheroid over the inscribed sphere would perform its librations, if detached from the spherical nucleus. He then supposes it suddenly to adhere to the sphere, and to drag it into the same libratory motion; and he computes the

libration of the whole mass, upon the supposition that the quantity of motion in the libratory spheroid is the same with the previous quantity of motion of the librating redundant ring or shell; whereas he should have computed it on the supposition that it was the quantity of momenta that remained unchanged.

The same thing obtains in rotations round fixed axes, as appears by the perfect sameness of the formulæ for both classes of motions.

This law, which, in imitation of the Leibnitzians, we might call the *conservatio momentorum*, makes it of importance to have expressions of the value of the accumulated momenta in such cases as most frequently occur. The most frequent is that of a sphere or spheroid in rotation round an axis or an equatorial diameter; and a knowledge of it is necessary for the solution of the problem of the precession of the equinoxes. See PRECESSION, no 33.

Let $APap$ (fig. 15.) be a sphere turning round the diameter Pp , and let DD', dd' be two circles parallel to the equator Aa , very near each other, comprehending between them an elementary slice of the sphere. Let $CA = a$, $CB = x$, and $BD = y$, and let π be the circumference of a circle whose radius is 1. Lastly, let the velocity of the point A be v . Then

$\frac{vy}{a}$ is the velocity at the distance y from the axis, πy is the quantity of matter in the circumference whose radius is y ; for it is the length of that circumference when expanded.

$\frac{v \pi y^2}{a}$, or $\frac{vy}{a} \times \pi y$, is the quantity of motion in this circumference turning round the axis Pp .

$\frac{v \pi y^3}{a}$ is the momentum of the same circumference.

$\frac{v \pi y^3}{a}$ is the fluxion of the momentum of the circle whose radius is y , turning in its own plane round the axis.

$\frac{v \pi y^4}{4a}$ is the fluent, or the momentum of the whole circle; and therefore it is the momentum of the circle DD' .

$\frac{v \pi y^4}{4a}$ is the fluxion of the momentum of the hemisphere; for $Bb = x$, and this fraction is the momentum of the slice $dDD'd'$.

$y^2 = a^2 - x^2$, and $y^4 = a^4 - 2a^2x^2 + x^4$. Therefore $\frac{v \pi}{2a} \times (a^4x - 2a^2x^3 + x^5)$ is the fluxion of the momentum of the whole sphere. Of this the fluent for the segments whose heights are CB , or x , is $\frac{v \pi}{2a}$

$(a^4x - \frac{2a^2x^3}{3} + \frac{x^5}{5})$.

Let x become a , and we have for the momentum of the whole sphere $\frac{v \pi}{2a} (a^5 - \frac{2}{3}a^5 + \frac{1}{5}a^5) = v \pi (\frac{a^4}{2} - \frac{a^4}{3} + \frac{a^4}{10}) = v \pi \frac{a^4}{15}$.

Let us suppose that this rotation has been produced by the action of a force mu ; that is, a force which would communicate the velocity u to the whole matter

Rotation. of the sphere, had it acted in a direction passing through its centre; and let us suppose that this force acted on the equatorial point A at right angles to AC: Its momentum is $mu a$, and this is equal to $v \pi \frac{4}{3} a^4$. Also, we know that $m = \frac{2}{3} \pi a^3$. Therefore we have $u \cdot \frac{2}{3} \pi a^4 = v \pi \frac{4}{3} a^4$, $\frac{2}{3} u = \frac{4}{3} v$, and $v = \frac{1}{2} u$.

110 Let EPQ p be an oblate spheroid whose semi-axis PC is a , and equatorial radius EC is b , and let v be the velocity on the equator of the inscribed sphere. Then since the momentum of the whirling circle DD is $\frac{v \pi p^4}{4 a}$, the momenta of the sphere and spheroid are in the quadruplicate ratio of their equatorial radii; and therefore that of the whole spheroid is $\frac{4}{3} \pi b^4 v$. And if w be the velocity at E corresponding to the velocity v at A, so that $w = \frac{b}{a} v$, we have the momentum of the spheroid, expressed in terms of the equatorial velocity at the surface, $\frac{4}{3} \pi b^3 a w$.

111 If the same force mu be made to act in the same manner at E, its momentum $mu b$ is $= \frac{4}{3} \pi b^3 a w$, and $w = \frac{15 mu}{4 \pi b^3 a}$. Therefore the angular velocities $\frac{v}{a}$, $\frac{w}{b}$, which the same force mu acting at A or E will produce in the sphere and the spheroid, are as $\frac{15 mu}{4 \pi a^4}$ and $\frac{15 mu}{4 \pi b^3 a}$, that is, in the triplicate ratio of the equatorial diameter b to the polar axis a .

112 Lastly, if the oblate spheroid is made to turn round an equatorial diameter passing through C perpendicular to the plane of the figure, it is plain that every section parallel to the meridian EPQ p is an ellipse similar to this meridian. If this ellipse differs very little from the inscribed circle, as is the case of the earth in the problem of the precession of the equinoxes, the momentum of each ellipse may be considered as equal to that of a circle of the same area, or whose diameter is a mean proportional between the equatorial and polar diameters of the spheroid. This radius is to the radius of the circumscribed circle as $\sqrt{ba}$ to b . Therefore the momenta of the section of the spheroid and of the circumscribed sphere are in the constant ratio of $b^2 a^2$ to b^4 , or of a^2 to b^2 . And if the velocity in the equator of this circumscribed sphere be called w , the momentum of the sphere is $\frac{4}{3} \pi b^4 w$; and therefore that of the spheroid is $\frac{4}{3} \pi b^2 a^2 w$, agreeably to what was assumed in the article PRECESSION, n° 33.

This value of the momentum of a spheroid round an equatorial diameter is only a very easy approximation; an exact value may be obtained by an infinite series. The whole matter of the spheroid may be considered as uniformly distributed on the surface of a similar spheroid whose diameter is $= \sqrt{\frac{1}{3}}$ of the diameter of the spheroid. It will have the same momentum, because a triangle in one of the ellipses, having an elementary arch of the circumference for its base, and the centre of the ellipse for its vertex, has its centre of gyration distant from the vertex $\sqrt{\frac{1}{3}}$ the length of the radius of the ellipse, and the problem is reduced to the finding the sum of these lines. But even when the series for this sum involves the 3d power of the eccentricity, it is not more exact than the above approximation.

A similar proposition may be obtained for a prolate spheroid vibrating round an equatorial diameter, and

applied to the conjectural shape of the moon, for explaining her oscillations.

The reader must have observed that the preceding 113 All rota- disquisitions refer to those motions only which result tory mo- from the action of external forces and to the state of tions ac- incipient motion. All circular motions, such as those companied by centri- of rotation, are accompanied by centrifugal forces. A fugal forces. central force is necessary for retaining every particle in its circular path; such forces must therefore be excited in the body, and can arise only from the forces of cohesion by which its particles are held together. These forces are mutual, equal, and opposite; and as much as a particle A (fig. 5) is retained by a force in the direction Aa of the line which connects it with the fixed axis Dd, or in the direction AG (fig. 10.), which connects it with the progressive axis; so much must the point a of the axis Dd be urged in the opposite direction aA, or so much must the whole body be urged in the direction GA. Every point therefore of the axis Dd, or of the axis through G in fig. 10. is carried in a variety of directions perpendicular to itself. These forces may or may not balance each other. If this balance obtains with respect to the fixed axis, its supports will sustain no pressure but what arises from the external force; if not, one support will be more pressed than the other; and if both were removed, the axis would change its position. The same must be affirmed of the axis through G in fig. 10. This, having no support, must change its position.

And thus it may happen, that the axis of rotation 114 passing through G which has been determined by the preceding disquisitions, is not permanent either in respect of the body, or in respect of absolute space. These two rotations are essentially different. The way to conceive both is this. Suppose a spherical surface described round the body, having its centre in the centre of gravity; and suppose this surface to revolve and to proceed forward along with the body: in short, let it be conceived as an immaterial surface attached to the body. The axis of rotation will pass through this surface in two points which we shall call its poles. Now, we say that the axis is permanent with respect to the body when it has always the same poles in this spherical surface. Suppose another spherical surface described round the same centre, and that this surface also accompanies the body in all its progressive motion, but does not turn with it. The axis is permanent with respect to absolute space when it has always the same poles in this surface: it is evident that these two facts are not inseparable. A boy's top spins on the same point and the same corporeal axis, while, towards the end of its motion, we observe it directing this round and round to different quarters of the room. And when we make an egg or a lemon spin with great rapidity on its side on a level table, we see it gradually rise up, till it stand quite on end, spinning all the while round an axis pointing to the zenith.

This change in the position of the axis is produced 115 by the unbalanced actions of the centrifugal forces exerted by the particles. Suppose two equal balls A and B (fig. 16.) connected by an inflexible rod whose middle point is G, the centre of gravity of the balls. This system may be made to turn round the material axis Dd, A describing the circle AEFA, and B describing the circle BHKB. The rod AB may also be conceived

Rotation. as moveable round the point G by means of a pin at right angles to the axis. Suppose the balls passing through the situations A and B ; their centrifugal forces urge them at the same time in the directions CA and OB , which impulsions conspire to make the connecting rod recede from both ends of the axis Dd . And thus the balls, instead of describing parallel circles round this axis, will describe parallel spirals, gradually opening the angles DGA , dGB more and more, till the balls acquire the position $\alpha\beta$ at right angles to the axis. They will not stop there, for each came into that position with an oblique motion. They will pass it; and were it not for the resistance of the air and the friction of the joint at G , they would go on till the ball A came to describe the circle BHK , and the ball B to describe the circle AEF . The centrifugal forces will now have exhausted by opposition all the motions which they had acquired during their passage from the position AB to the position $\alpha\beta$; and now they will again describe spirals gradually opening, and then contracting, till the balls arrive at their original position AB , when the process will begin again. Thus they will continue a kind of oscillating rotation.

116 Thus the axis is continually changing with respect to the system of balls; but it is fixed in respect to absolute space, because the axis Dd is supported. It does not yet appear that it has any tendency to change its position, because the centrifugal tendency of the balls is completely yielded to by the joint at G . The material axis has indeed sustained no change; but the real axis, or mathematical line round which the rotation was going on every moment, has been continually shifting its place. This is not so obvious, and requires a more attentive consideration. To show accurately the gradual change of position of the real axis of rotation would require a long discussion. We shall content ourselves with exhibiting a case where the position of the momentary axis is unquestionably different from Dd , which we may suppose horizontal.

Take the balls in the position $\alpha\beta$. They came into this position with a spiral motion, and therefore each of them was moving obliquely to the tangents $\alpha\phi$, $\beta\gamma$ to the circle $\alpha\delta\beta\epsilon$, suppose in the directions $\alpha\theta$, $\beta\lambda$. They are therefore moving round the centre G in a plane $\theta\alpha\beta\lambda$, inclined to the plane $\phi\alpha\beta\gamma$ of the circle $\alpha\delta\beta\epsilon$. The momentary axis of rotation is therefore perpendicular to this oblique plane, and therefore does not coincide with Dd .

117 **Of the eva-** We cannot enter upon the investigation of this eva-
gation of gation of the axis, although the subject is both cu-
the axis. rious and important to the speculative mathematicians. A knowledge of it is absolutely necessary to a complete solution of the great problem of the precession. But when treating that article, we contented ourselves with showing that the evagation which obtains in this natural phenomenon is so exceedingly minute, that although multiplied many thousands of times, it would escape the nicest observations of modern astronomers; and that it is a thing which does not accumulate beyond a certain limit, much too small for observation, and then diminishes again, and is periodical. Euler, D'Alembert, Frisi, and De la Grange, have shown the momentary position of the real variable axis corresponding to any given time; and Landen has with great ingenuity and elegance connected these momentary posi-

sitions, and given the whole paths of evagation. Mr **Rotation.** Segnor was, we believe, the first who showed (in a Dissertation *De Motu Turbinum*, Halle, 1755), that in every body there were at least three lines passing through the centre of gravity at right angles to each other, forming the solid angle of a cube, round which the centrifugal forces were accurately balanced, and therefore a rotation begun round either of these three lines would be continued, and they are permanent axes of rotation. Albert Euler gave the first demonstration in 1760, and since that time the investigation of these axes has been extended and improved by the different authors already named. It is an exceedingly difficult subject; and we recommend the syn- thetical investigation by Frisi in his *Cosmographia* as the fittest for instructing a curious reader to whom the sub- ject is new. We shall conclude this dissertation with a beautiful theorem, the enunciation of which we owe to P. Frisi, which has amazingly improved the whole theory, and gives easy and elegant solutions of the most difficult problems. It is analogous to the great theorem of the composition of motions and forces.

If a body turns round an axis AGa (fig. 17.) pas- 118
sing through its centre of gravity G with the angular **P. Frisi's**
velocity a , while this axis is carried round another **theorem.**
axis BGb with the angular velocity b , and if GD be taken to GK as a to b (the points B and E being taken on that side of the centre where they are moving towards the same side of the plane of the figure), and the line DE be drawn, though the whole and every particle of the body will be in a state of rotation round a third axis CGc , lying in the plane of the other two, and parallel to DE , and the angular velocity c round this axis will be to a and to b as DE is to GD and to GE .

For, let P be any particle of the body, and suppose a spherical surface to be described round G passing through P . Draw PR perpendicular to the plane of the figure. It is evident that PR is the common sec- tion of the circle of rotation IPi round the axis Aa , and the circle KPk of rotation round the axis Bb . Let Ii , Kk be the diameters of these circles of rotation, F and G their centres. Draw the radii PF and PO , and the tangents PM and PN . These tangents are in a plane MPN which touches the sphere in P , and cuts the plane of the axis in a line MN , to which a line drawn from the centre G of the sphere through the point R is perpendicular. Let PN re- present the velocity of rotation of the point P round the axis Bb , and Pf its velocity of rotation round Aa . Complete the parallelogram $PNtf$. Then Pt is the direction and velocity of motion resulting from the composition of PN and Pf . Pt is in the plane MPN , because the diagonal of a parallelogram is in the plane of its sides PN and Pf .

Let perpendiculars fF , tT , be drawn to the plane of the axes, and the parallelogram $PNtf$ will be ortho- graphically projected on that plane, its projection being a parallelogram $RNTF$. (F here falls on the centre by acci- dent). Draw the diagonal RT . It is evident that the plane $PRtT$ is perpendicular to the plane of the two axes, because PR is so. Therefore the compound motion Pt is in the plane of a circle of revolution round some axis situated in the plane of the other two. There- fore produce TR , and draw GC cutting it at right angles

Rotation.

angles in H, and let LP be the circle, and PH a radius. P is therefore a tangent, and perpendicular to PH, and will meet RT in some point Q of the line MN. The particle P is in a state of rotation round the axis CG, and its velocity is to the velocities round Aa or Bb as Pt to Pf or PN. The triangles PRN and OPN are similar. For PN the tangent is perpendicular to the radius OP, and PR is perpendicular to ON. There-

fore $OP : PN = PR : RN$, and $RN = \frac{PR \cdot PN}{OP}$. But the velocity of P round the axis Bb is $OP \cdot b$. Therefore $RN = \frac{PR \cdot OP \cdot b}{OP} = PR \cdot b$. In like manner RF

$= PR \cdot a$. Therefore $RF : RN = a : b = GD : GE$. But $NT : RN = \text{fine NRT} : \text{fine NTR}$, and $GD : GE = \text{fine GED} : \text{fine GDE}$. Therefore $\text{fine NRT} : \text{fine NTR} = \text{fine GED} : \text{fine GDE}$. But $RNT = EGD$, for NR is perpendicular to EG and NT (being parallel to IF) is perpendicular to DG. Therefore TR is perpendicular to ED, and Cc is parallel to ED, and the rotation of the particle P is round an axis parallel to ED.

And since RN, RF, RT, are as the velocities b, a, c, round these different axes, and are proportional to EG, DG, DE, we have c to a or to b as ED to GD or GE, and the proposition is demonstrated.

This theorem may be thus expressed in general terms.

119
Expressed
in general
terms.

If a body revolves round an axis passing through its centre of gravity with the angular velocity a, while this axis is carried round another axis, also passing through its centre of gravity, with the angular velocity b, these two motions compose a motion of every particle of the body round a third axis, lying in the plane of the other two, and inclined to each of the former axes in angles whose fines are inversely as the angular velocities round them; and the angular velocity round this new axis is to that round one of the primitive axes as the sine of inclination of the two primitive axes is to the sine of the inclination of the new axis to the other primitive axis.

When we say that we owe the enunciation of this theorem to P. Frisi, we grant at the same time that something like it has been supposed or assumed by other authors. Newton seems to have considered it as true, and even evident, in homogeneous spheres; and this has been tacitly acquiesced in by the authors who followed him in the problem of the precession. Inferior writers have carelessly assumed it as a truth. Thus Nollet, Gravesande, and others, in their contrivances for exhibiting experiments for illustrating the composition of vortices, proceeded on this assumption. Even authors of more scrupulous research have satisfied themselves with a very imperfect proof. Thus Mr Landen, in his excellent dissertation on rotatory motion, Philosophical Transactions, Vol. LXVII. contents himself with showing, that, by the equality and opposite directions of the motions round the axes Aa and Bb, the point C will be at rest, and from thence concludes that CGc will be the new axis of rotation. But this is exceedingly hasty (note also, that this dissertation was many years posterior to that of P. Frisi): For although the separate motions of the point C may be equal and opposite, it is by no means either a mathematical or a mechanical consequence that the body will turn round the axis Cc.

In order that the point C may remain at rest, it is necessary that all tendencies to motion be annihilated: this is not even thought of in making the assumption. Frisi has shown, that in the motion of every particle round the axis Cc, there is involved a motion round the two axes Aa and Bb, with the velocities a and b; and it is a consequence of this, and of this only, that the impulses which would separately produce the rotations of every particle round Aa and Bb will, either in succession or in conjunction, produce a rotation round Cc. Moreover, Mr Landen's not having attended to this, has led him, as we imagine, into a mistake respecting the velocity with which the axis changes its position; and though his process exhibits the path of evagation with accuracy, we apprehend that it does not assign the true times of the axes arriving at particular points of this path.

It follows from this proposition, that if every particle of a body, whether solid or fluid, receives in one instant a separate impulse, competent to the production of a motion of the particle round an axis with a certain angular velocity, and another impulse competent to the production of a motion round another axis with a certain velocity, the combined effect of all these impulses will be a motion of the whole system round a third axis given in position, with an angular velocity which is also given: and this motion will obtain without any separation or disunion of parts; for we see that a motion round two axes constitute a motion round a third axis in every particle, and no separation would take place although the system were incoherent like a mass of sand, except by the action of the centrifugal forces arising from rotation. Mr Simpson therefore erred in his solution of the problem of the precession, by supposing another force necessary for enabling the particles of the fluid spheroid to accompany the equator when displaced from its former situation. The very force which makes the displacement produces the accompaniment, as far as it obtains, which we shall see presently is not to the extent that Mr Simpson and other authors who treat this problem have supposed.

For the same reason, if a body be turning round any axis, and every particle in one instant get an impulse precisely such as is competent to produce a given angular velocity round another axis, the body will turn round a third axis given in position, with a given angular velocity: for it is indifferent (as it is in the ordinary composition of motion) whether the forces act on a particle at once or in succession. The final motion is the same both in respect of direction and velocity.

Lastly, when a rigid body acquires a rotation round an axis by the action of an impulse on one part of it, and at the same time, or afterwards, gets an impulse on any part which, alone, would have produced a certain rotation round another axis, the effect of the combined actions will be a rotation round a third axis, in terms of this proposition; for when a rigid body acquires a motion round an axis, not by the simultaneous impulse of the precisely competent force on each particle, but by an impulse on one part, there has been propagated to every particle (by means of the connecting forces) an impulse precisely competent to produce the motion which the particle really acquires; and when a rigid body, already

Rotation.

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Conclusions
deduced
from this
proposition.

121

122

Rotation. ready turning round an axis Aa (fig. 17.), receives an impulse which makes it actually turn round another axis Cc , there *has been propagated to each particle* a force precisely competent to produce, not the motion, but the *change* of motion which takes place in that particle, that is, a force which, when compounded with the inherent force of its primitive motion, produces the new motion; that is (by this theorem), a force which alone would have caused it to turn round a third axis Bb , with a rotation making the other constituent of the actual rotation round Cc .

123 This must be considered as one of the most important propositions in dynamics, and gives a great extension to the doctrine of the composition of motion. We see that rotations are compounded in the same manner as other motions, and it is extremely easy to discover the composition. We have only to suppose a sphere described round the centre of the body; and the equator of this sphere corresponding to any primitive position of the axis of rotation gives us the direction and velocity of the particles situated in it. Let another great circle cut this equator in any point; it will be the equator of another rotation. Set off an arch of each from the point of intersection, proportional to the angular velocity of each rotation, and complete the spherical parallelogram. The great circle, which is the diagonal of this parallelogram, will be the equator of the rotation, which is actually compounded of the other two.

124 And thus may any two rotations be compounded. We have given an instance of this in the solution of the problem of the *PRECESSION of the Equinoxes*, Vol. XV. p. 463.

125 It appears plainly in the demonstration of this theorem that the axis Cc is a new line in the body. The change of rotation is not accomplished by a transference of the poles and equator of the former rotation to a new situation, in which they are again the poles and equator of the rotation; for we see that in the rotation round the axis Cc , the particle of the body which was formerly the pole A is describing a circle round the axis Cc . Not knowing this composition of rotations, Newton, Walmesley, Simpson, and other celebrated mathematicians, imagined, that the axis of the earth's rotation remained the same, but changed its position. In this they were confirmed by the constancy of the observed latitudes of places on the surface of the earth. But the axis of the earth's rotation really changes its place, and the poles shift through different points of its surface; but these different points are too near each other to make the change sensible to the nicest observation.

126 **Respecting the position of the axis of rotation** It would seem to result from these observations, that it is impossible that the axis of rotation can change its position in absolute space without changing its position in the body, contrary to what we experience in a thousand familiar instances; and indeed this is impossible by any one change. We cannot by the impulse of any one force make a body which is turning round the axis Aa change its position and turn round the same material axis brought into the position Cc . In the same way that a body must pass through a series of intermediate points, in going from one end of a line to the other, so it must acquire an infinite series of intermediate rotations (each of them momentary) before the same material axis passes into another position, so as to become an axis of rotation. A momentary impulse

may make a great change of the position of the axis of rotation, as it may make in the velocity of a rectilinear motion. Thus although the rotation round Aa be indefinitely small, if another equally small rotation be impressed round an axis Bb perpendicular to Aa , the axis will at once shift to Cc half way between them; but a succession of rotations is necessary for carrying the primitive material axis into a new position, where it is again an axis. This transference, however, is possible, but gradual, and must be accomplished by a *continuation* of impulses totally different from what we would at first suppose. In order that A may pass from A to C , it is not enough that it gets an impulse in the direction AC . Such an impulse would carry it thither, if the body had not been whirling round Aa by the mere perseverance of matter in its state of motion; but when the body is already whirling round Aa , the particles in the circle IPi are moving in the circumference of that circle; and since that circle also partakes of the motion given to A , every particle in it must be *incessantly* deflected from the path in which it is moving. The *continual* agency of a force is therefore necessary for this purpose; and if this force be discontinued, the point A will immediately quit the plane of the arch AC , along which we are endeavouring to move it, and will start up.

This is the theorem which we formerly said would enable us to overcome the difficulties in the investigation of the axis of rotation.

127 Thus we can discover what Mr Landen calls the **128 The evagations of the poles of rotation by the action of centrifugal forces:** For in fig. 16. the known velocity of the ball A and the radius AC of its circle of rotation will give us the centrifugal force by which the balls *tend* to turn in the plane $DAdBD$. This gives the axis Dd a tendency to move in a plane perpendicular to the plane of the figure; and its separation from the poles D and d does not depend on the separation of the connecting rod AB from its present inclination to Dd , but on the angle which the spiral path of the ball makes with the plane of a circle of rotation round Dd . The distance of the new poles from D and d is an arch of a circle which measures the angle made by the spiral with the circle of rotation round the primitive axis. This will gradually increase, and the mathematical axis of rotation will be describing a spiral round D and d , gradually separating from these points, and again approaching them, and coinciding with them again, at the time that the balls themselves are most of all removed from their primitive situation, namely, when A is in the place of B .

129 The same theorem also enables us to find the **And the incipient axis of rotation in complicated cases** which are almost inaccessible by means of the elementary principles of rotation.

130 Thus, when the centres of oscillation and percussion do not coincide, as we supposed in fig. 5. and 12. Suppose, first, that they do coincide, and find the position of the axis ab , and the angular velocity of the rotation. Then find the centre of percussion, the axis Pp , and the momentum round it, and the angular velocity which this momentum would produce. Thus we have obtained two rotations round given axes, and with given angular velocities. Compound these rotations by this theorem, and we obtain the required position of the true

Rotation. true incipient axis of rotation, and the angular velocity, without the intricate process which would otherwise have been necessary.

131 If the body is of such a shape, that the forces in the plane DCG do not balance each other, we shall then discover a momentum round an axis perpendicular to this plane. Compound this rotation in the same manner with the rotation round D d.

132 **Position of the axis when the centres of percussion and rotation do not coincide.** And from this simple view of the matter we learn (what would be difficult to discover in the other way), that when the centre of percussion does not coincide with that of rotation, the axis is in the plane DGC, though not perpendicular to PG. But when there is a momentum round an axis perpendicular to this plane, the incipient axis of rotation is neither perpendicular to PC, nor in a plane perpendicular to that passing through the centre in the direction of the impelling force.

We must content ourselves with merely pointing out these tracks of investigation to the curious reader, and recommending the cultivation of this most fruitful theorem of Father Frisi.

133 **Concluding remarks on seamanship.** These are by no means speculations of mere curiosity, interesting to none but mathematicians: the noblest art which is practised by man must receive great improvement from a complete knowledge of this subject. We mean the art of SEAMANSHIP. A ship, the most admirable of machines, must be considered as a body in free space, impelled by the winds and waters, and continually moved round spontaneous axes of conversion, and incessantly checked in these movements. The trimming of the sails, the action of the rudder, the very disposition of the loading, all affect her versatility. An experienced seaman knows by habit how to produce and facilitate these motions, and to check or stop such as are inconvenient. Experience, without any reflection or knowledge how and why, informs him what position of the rudder produces a deviation from the course. A sort of common sense tells him, that, in order to make the ship turn her head away from the wind, he must increase the surface or the obliquity of the head sails, and diminish the power of the sails near the stern. A few other operations are dictated to him by this kind of common sense; but few, even of old seamen, can tell why a ship has such a tendency to bring her head up in the wind, and why it is so necessary to crowd the fore part of the ship with sails; fewer still know that a certain shifting of the loading will facilitate some motions in different cases; that the crew of a great ship running suddenly to a particular place shall enable the ship to accomplish a movement in a stormy sea which could not be done otherwise; and perhaps not one in ten thousand can tell why this procedure will be successful. But the mathematical inquirer will see all this; and it would be a most valuable acquisition to the public, to have a manual of such propositions, deduced from a careful and judicious consideration of the circumstances, and freed from that great complication and intricacy which only the learned can unravel, and expressed in a familiar manner, clothed with such reasoning as will be intelligible to the unlearned; and though not accurate, yet persuasive. Mr Bouguer, in his *Traité du Navire*, and in his *Manœuvre des Vaisseaux*, has delivered a great deal of useful information on this subject; and Mr Bezout has made a very useful abstract of these works in his *Cours de Mathématique*. But the subject

is left by them in a form far too abstruse to be of any general use: and it is unfortunately so combined with or founded on a false theory of the action and resistance of fluids, that many of the propositions are totally inconsistent with experience, and many maxims of seamanship are false. This has occasioned these doctrines to be neglected altogether. Few of our professional seamen have the preparatory knowledge necessary for improving the science; but it would be a work of immense utility, and would acquire great reputation to the person who successfully prosecutes it.

We shall mention under the article SEAMANSHIP the chief problems, and point out the mechanical principles by which they may be solved.

ROTHERAM, a town in the West Riding of Yorkshire, seated on the river Don, near which there is a handsome stone-bridge. It is a well-built place, and the market is large for provisions. W. Long. 1. 10. N. Lat. 53. 25.

ROTHSAY, a town in the isle of Bute, of which it is the capital. It is a well-built town of small houses, and about 200 families; and is within these few years much improved. It has a good pier, and is seated at the bottom of a fine bay, whose mouth lies exactly opposite to Loch Steven in Cowal. Here is a fine depth of water, a secure retreat, and a ready navigation down the Frith for an export trade. Magazines of goods for foreign parts might be most advantageously erected here. The women of this town spin yarn, the men support themselves by fishing. W. Long. 5. 0. N. Lat. 55. 50.

Rothsay gives the title of Duke to the prince of Scotland, a title which was formerly accompanied with suitable revenues, powers, and privileges. Of the origin of this title we have the following account from the pen of the learned Dr M'Leod of Glasgow. Some time between the 16th of March and the 26th of October 1398, John of Gaunt, who is styled John duke of Aquitaine and Lancaster, uncle to the king of England, and David, who is styled earl of Carrick, eldest son of the king of Scotland, met for the purpose of settling the borders, and terminating all matters in dispute. At a subsequent interview between the same parties, David is styled Duke of Rothsay. "This innovation probably proceeded on an idea, to which the interview of the two princes might naturally give rise, that it was unsuitable, and unworthy of the Scottish national dignity, that the princes of England should enjoy a title of nobility, which was esteemed to be of higher rank than that possessed by the hereditary prince of Scotland." And this, in the opinion of our author, was the occasion of introducing the title of Duke into Scotland.

ROTTBELLIA, in botany; a genus of the digynia order, belonging to the triandria class of plants. The rachis is jointed, roundish, and in many cases filiform; the calyx is ovate, lanceolated, flat, simple, or bipartite; the florets are alternate on the winding rachis.

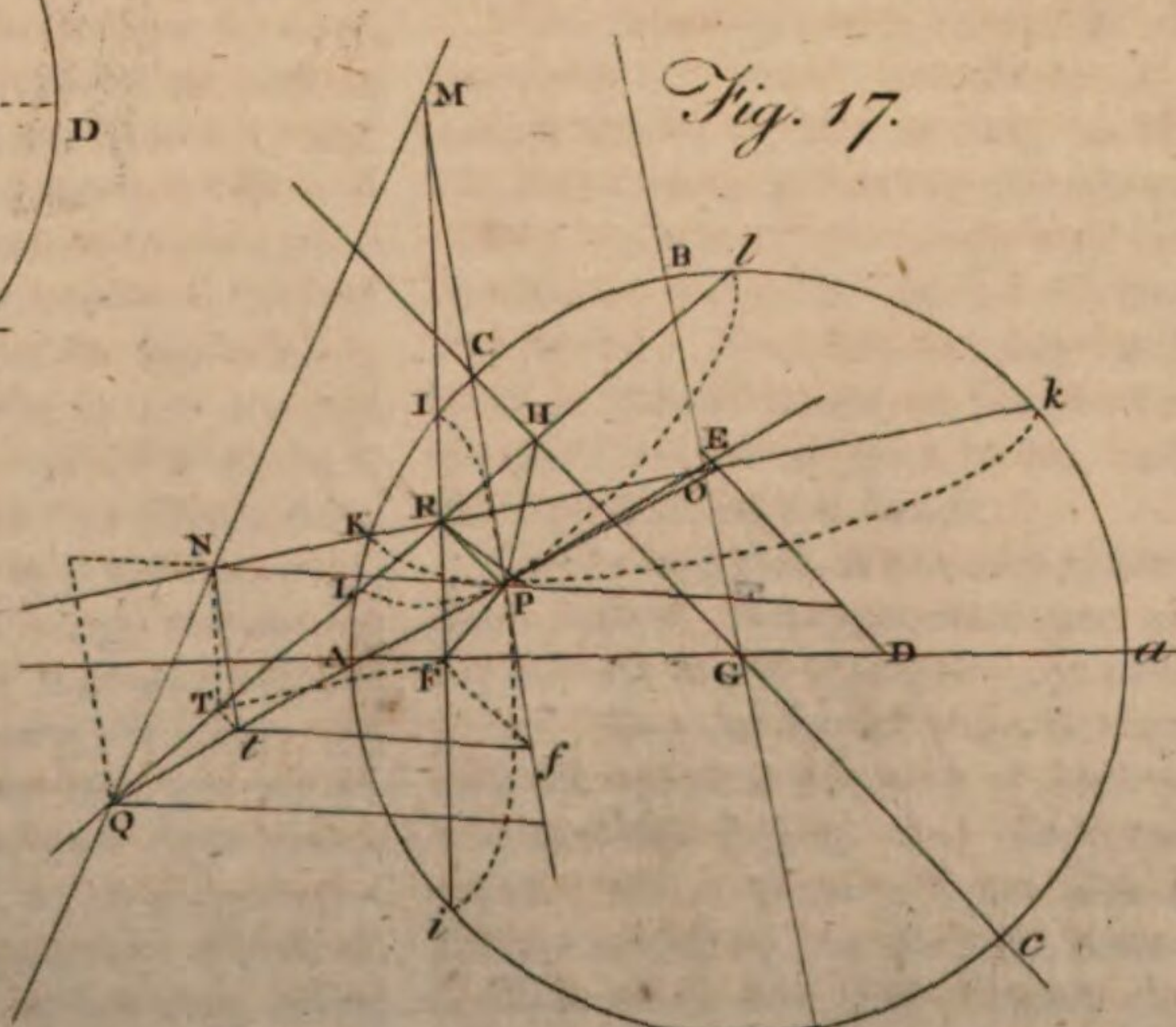
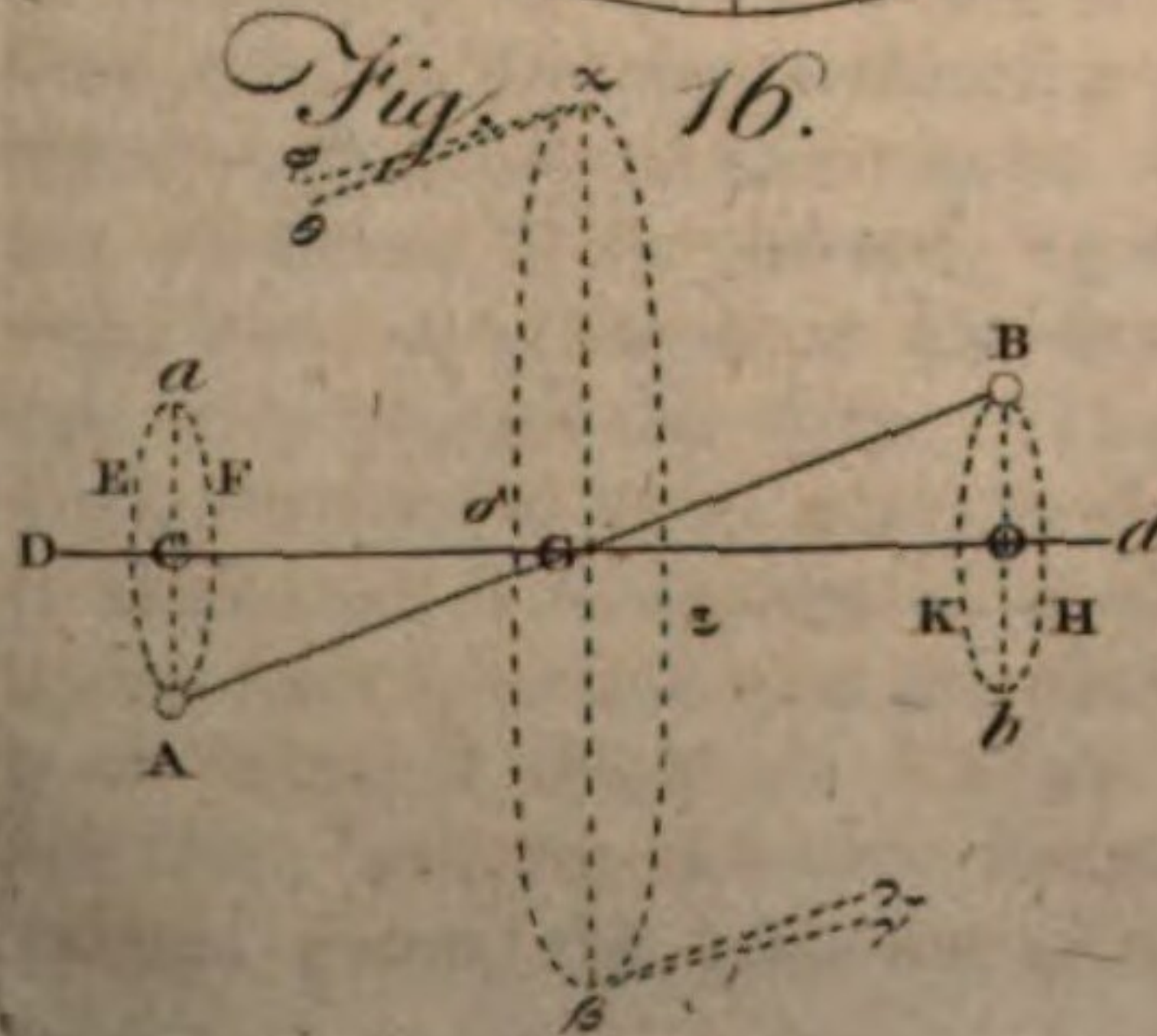
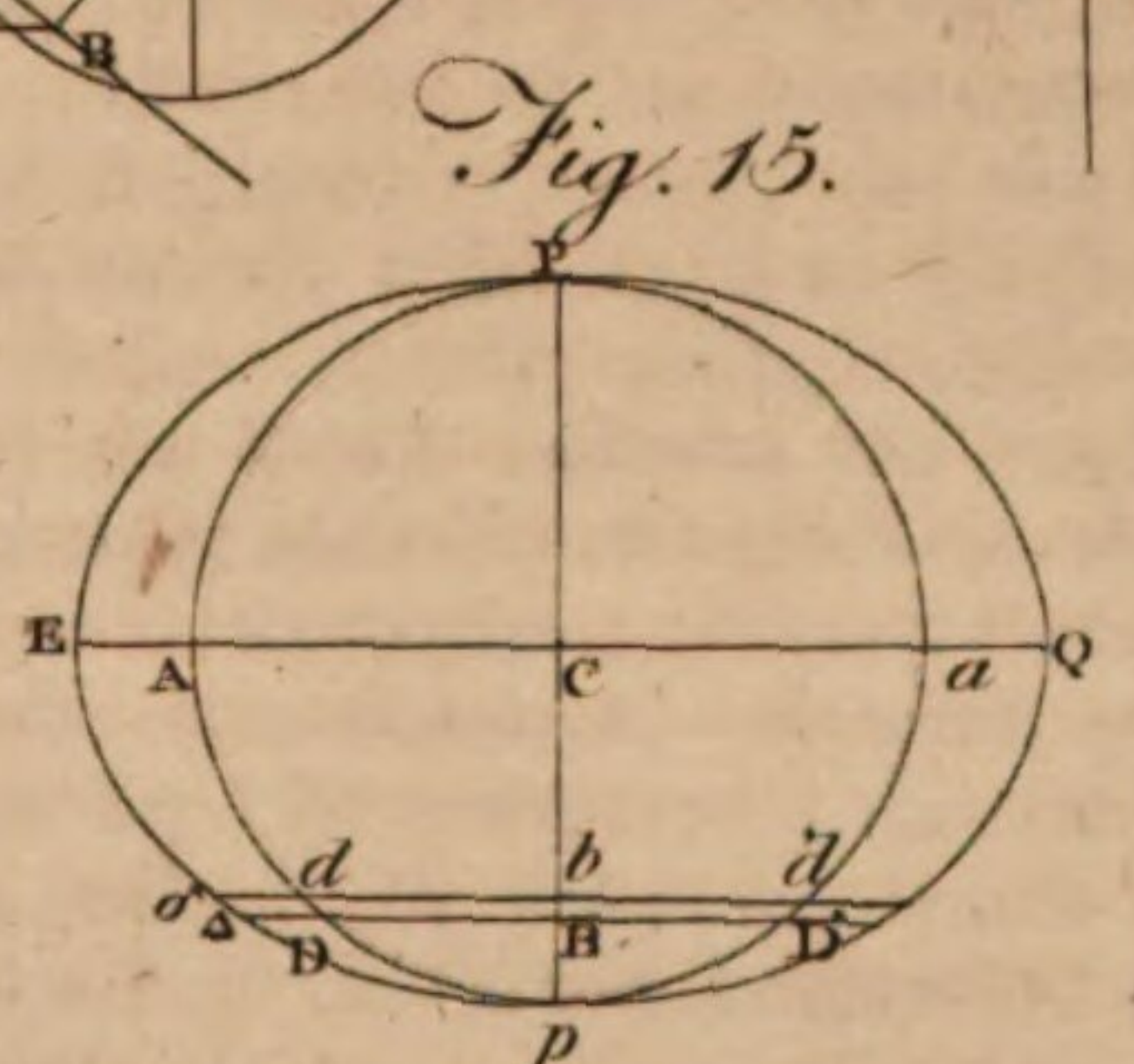
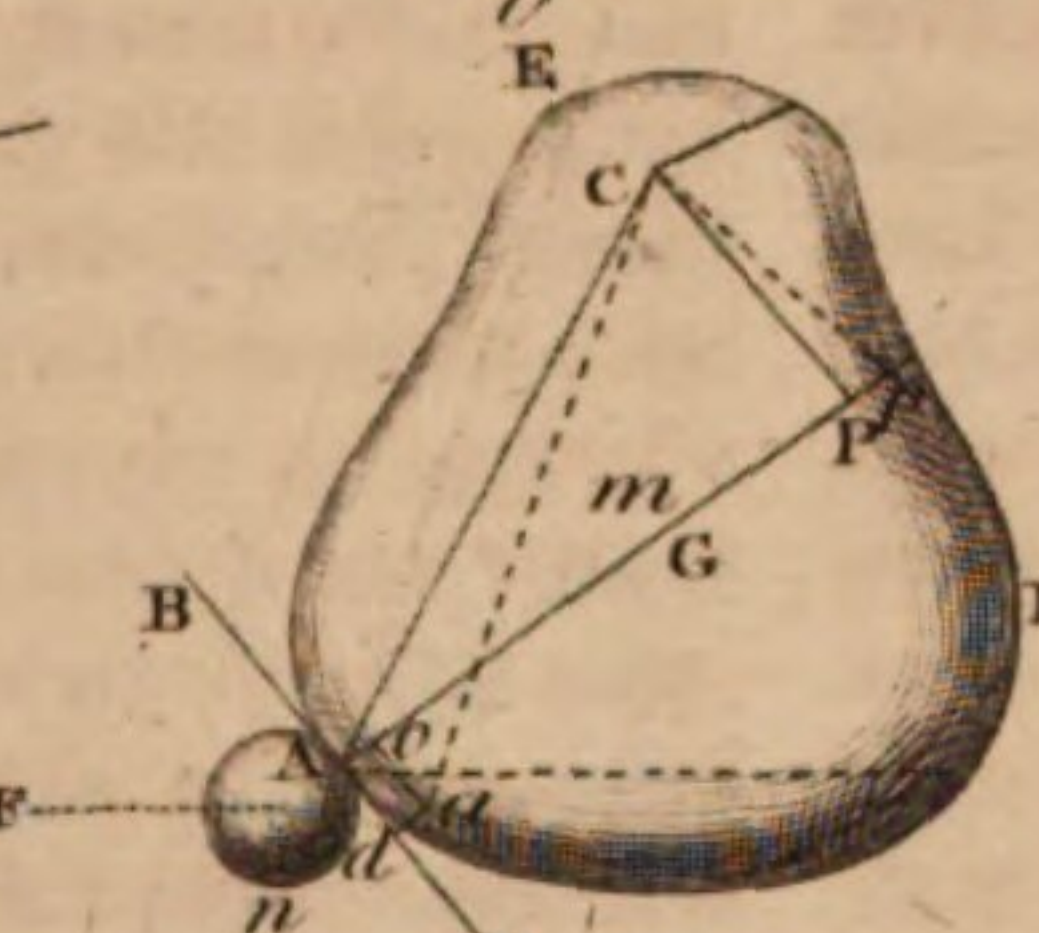
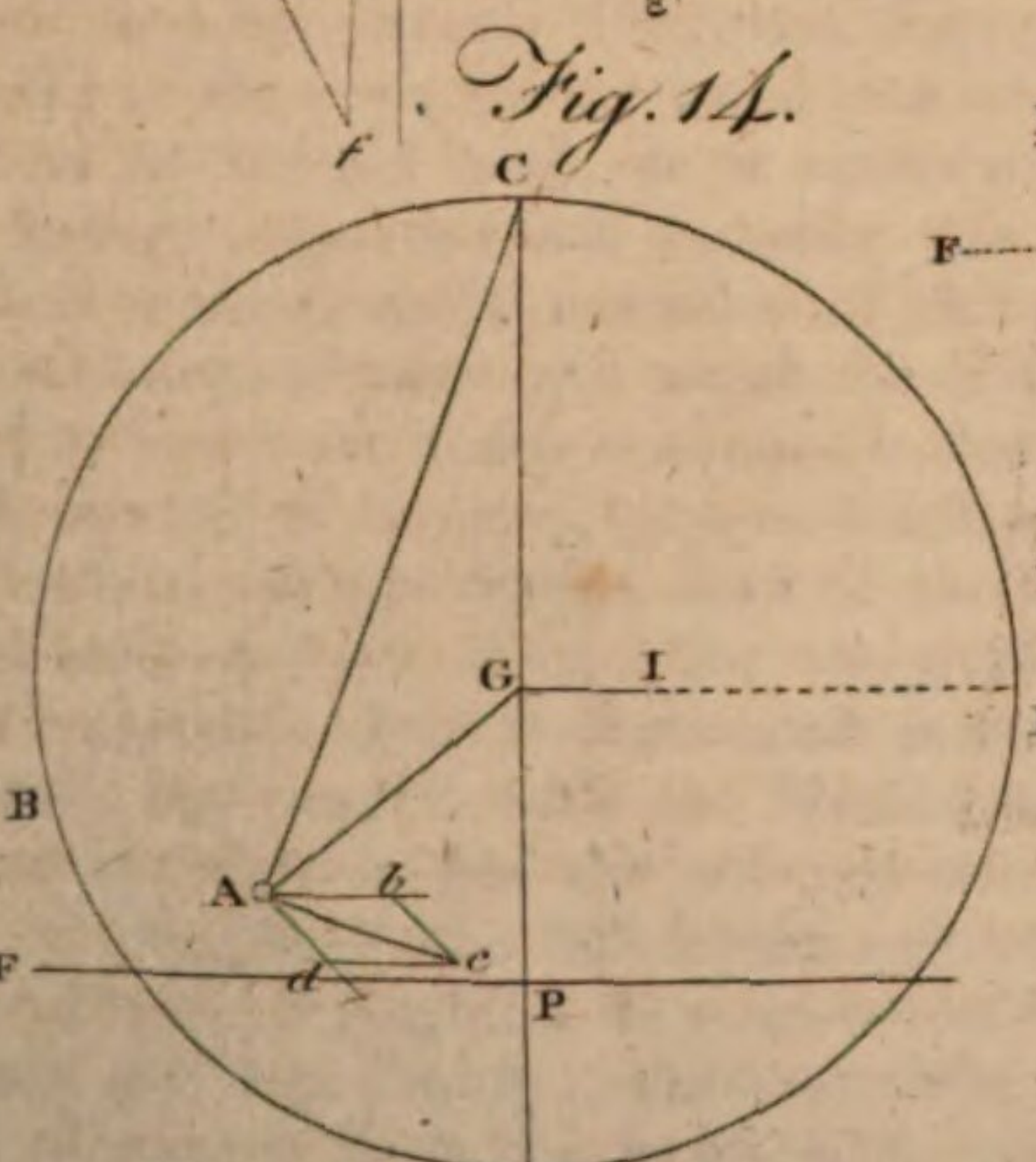
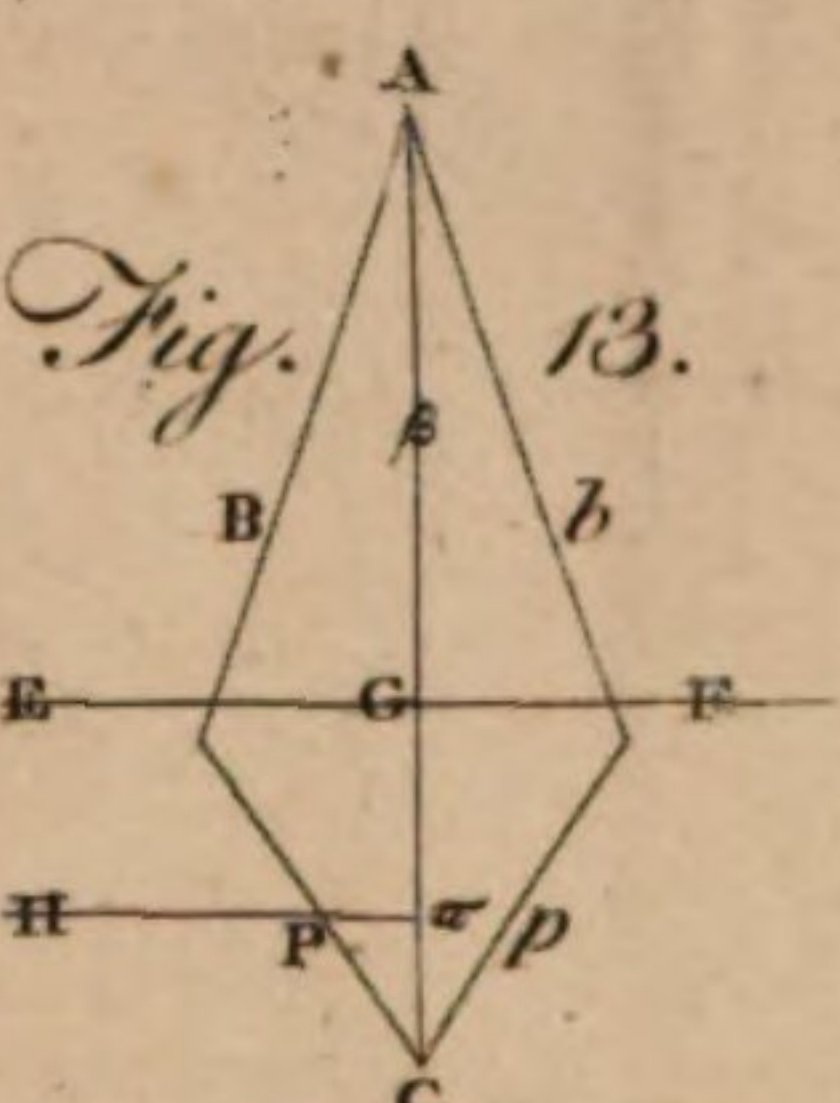
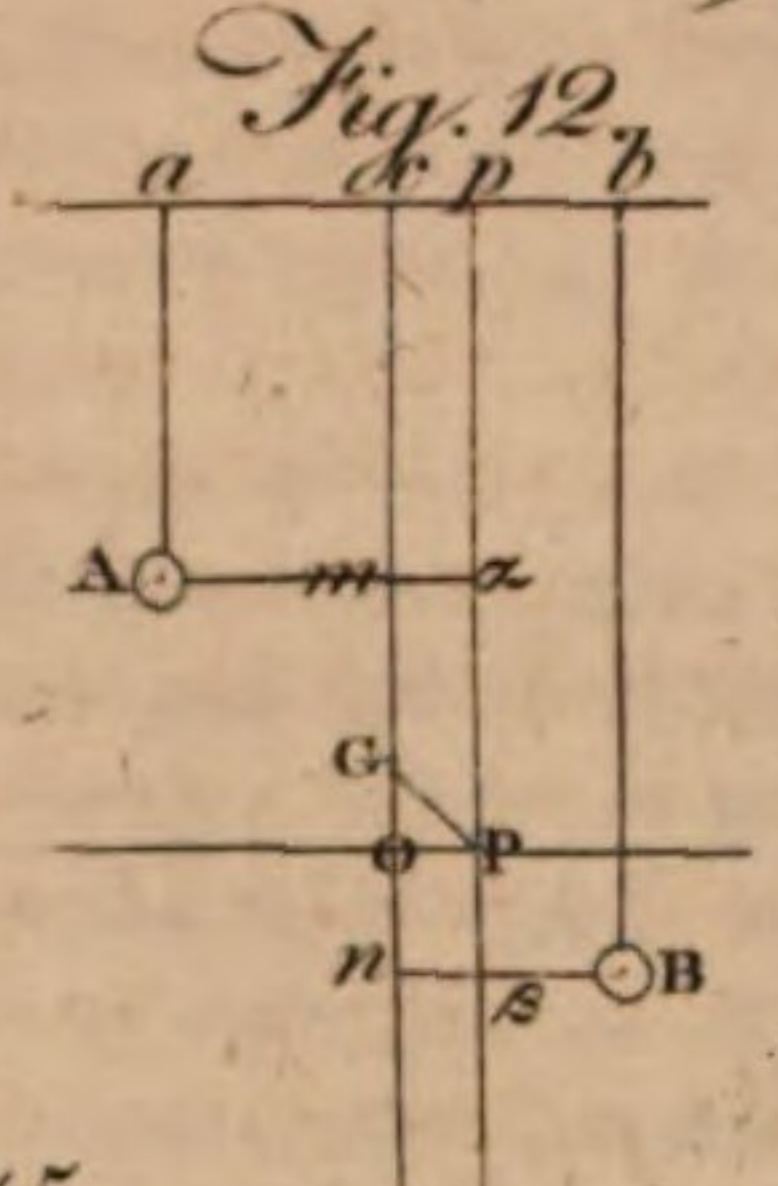
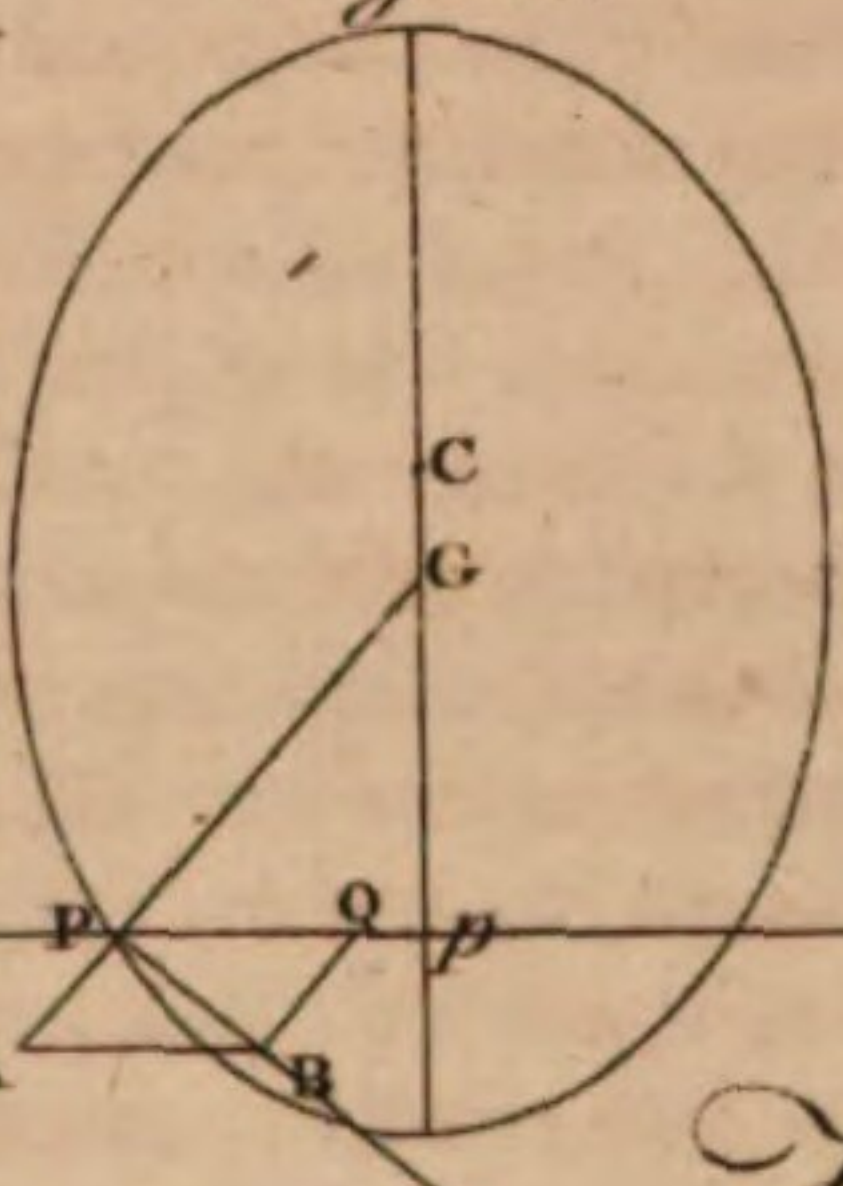
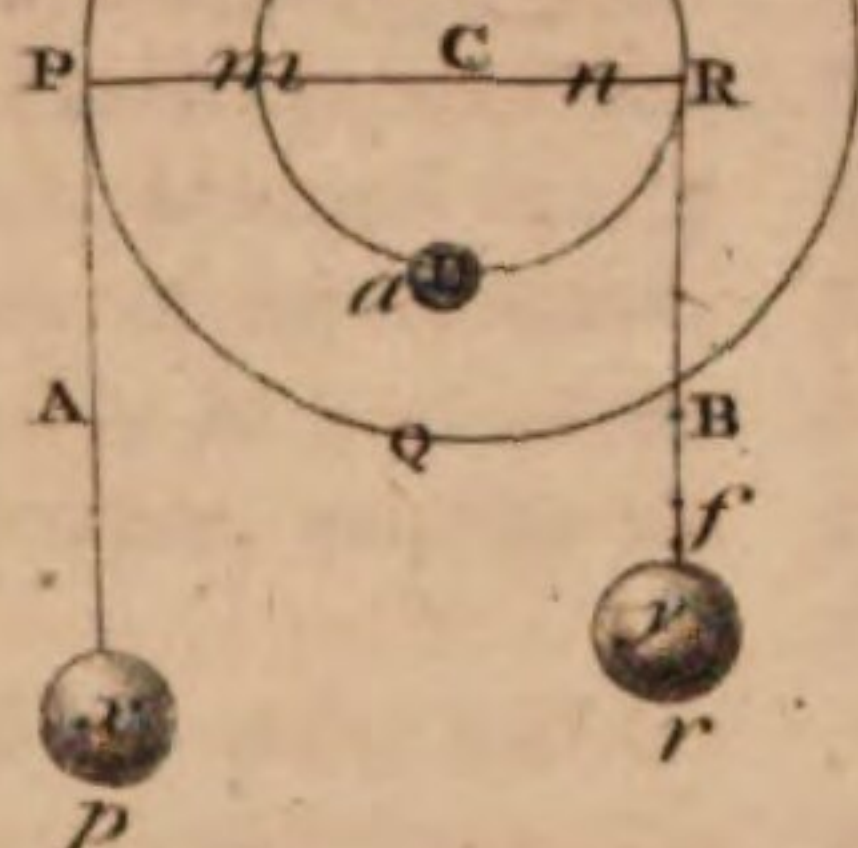
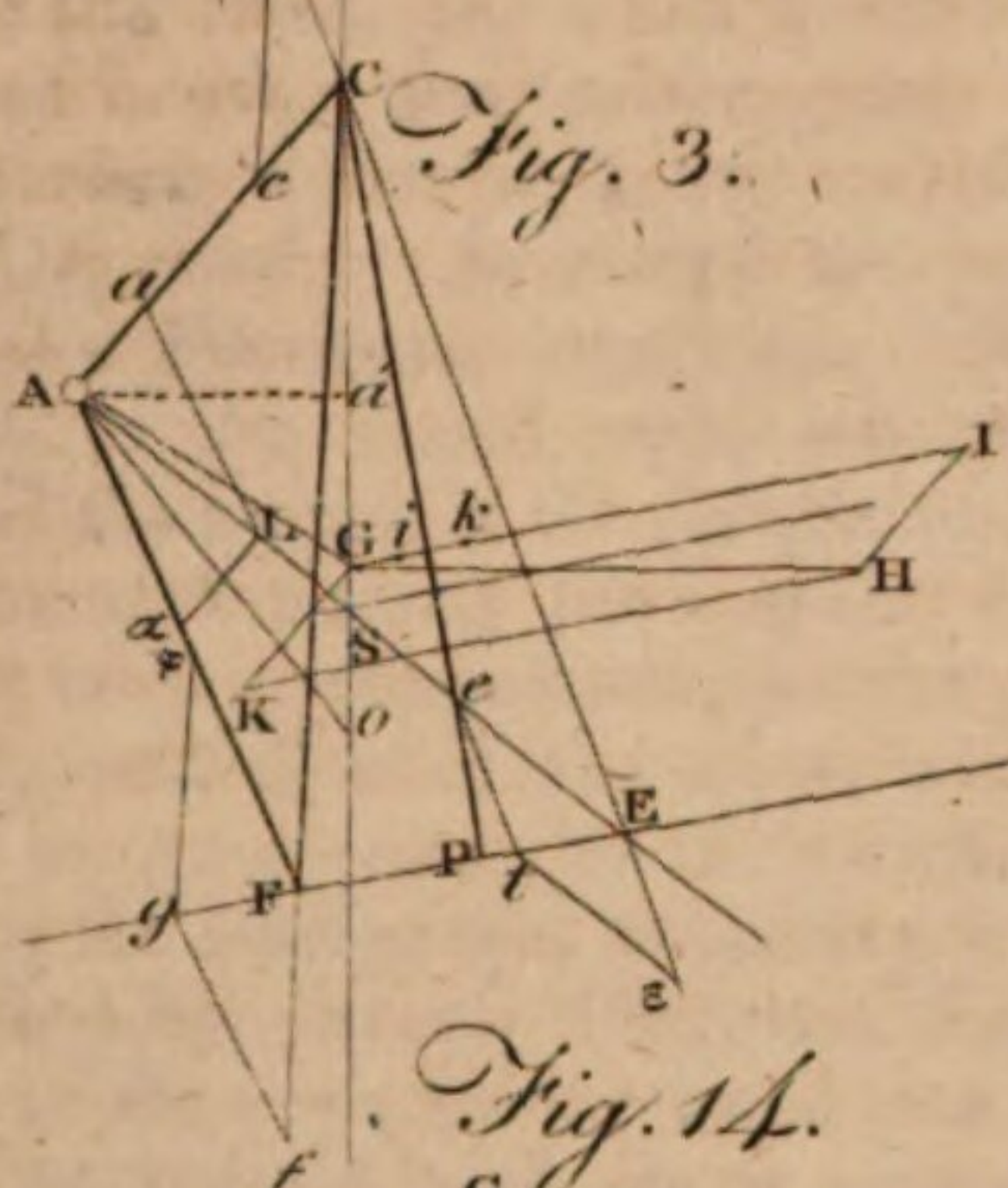
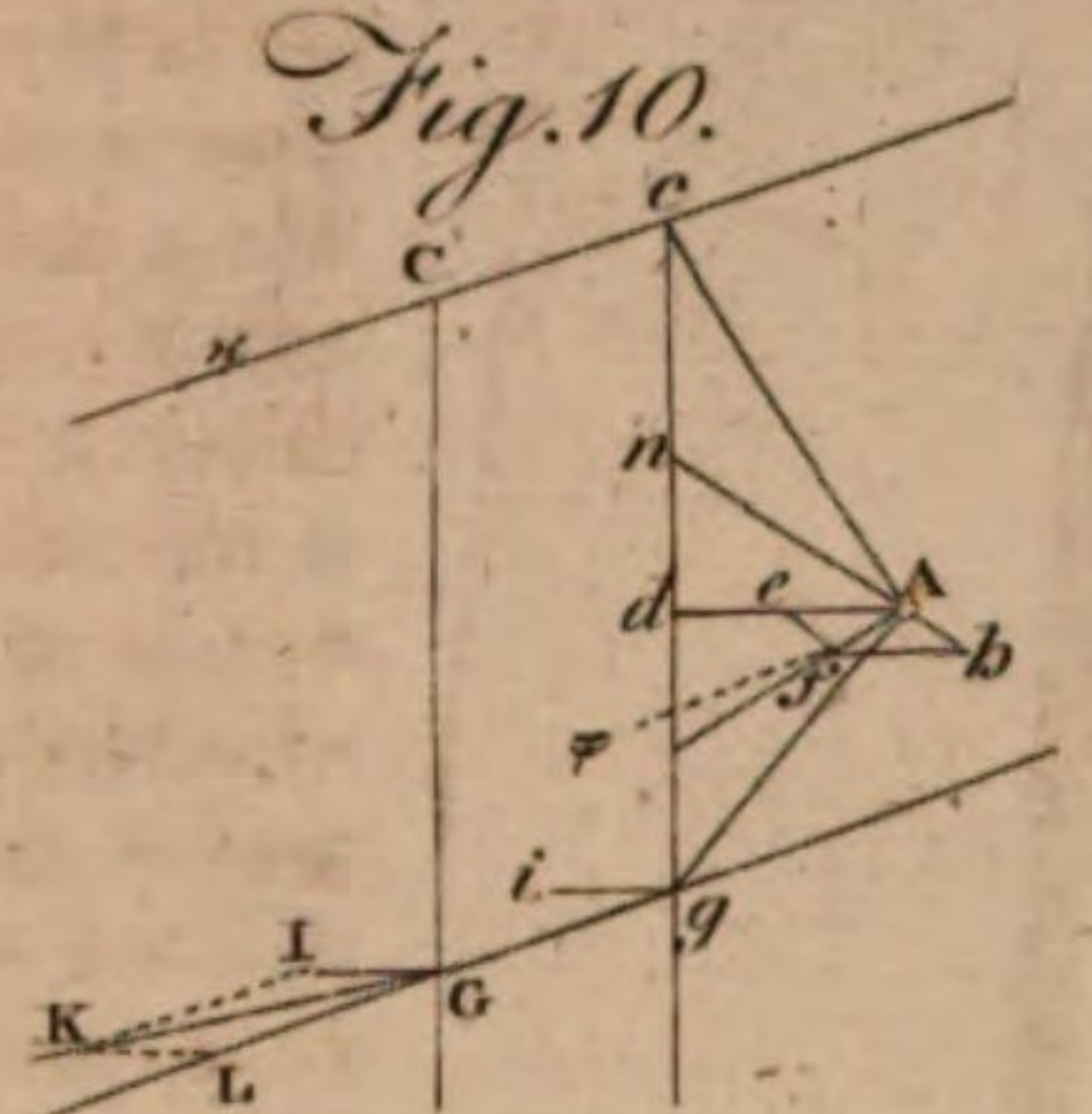
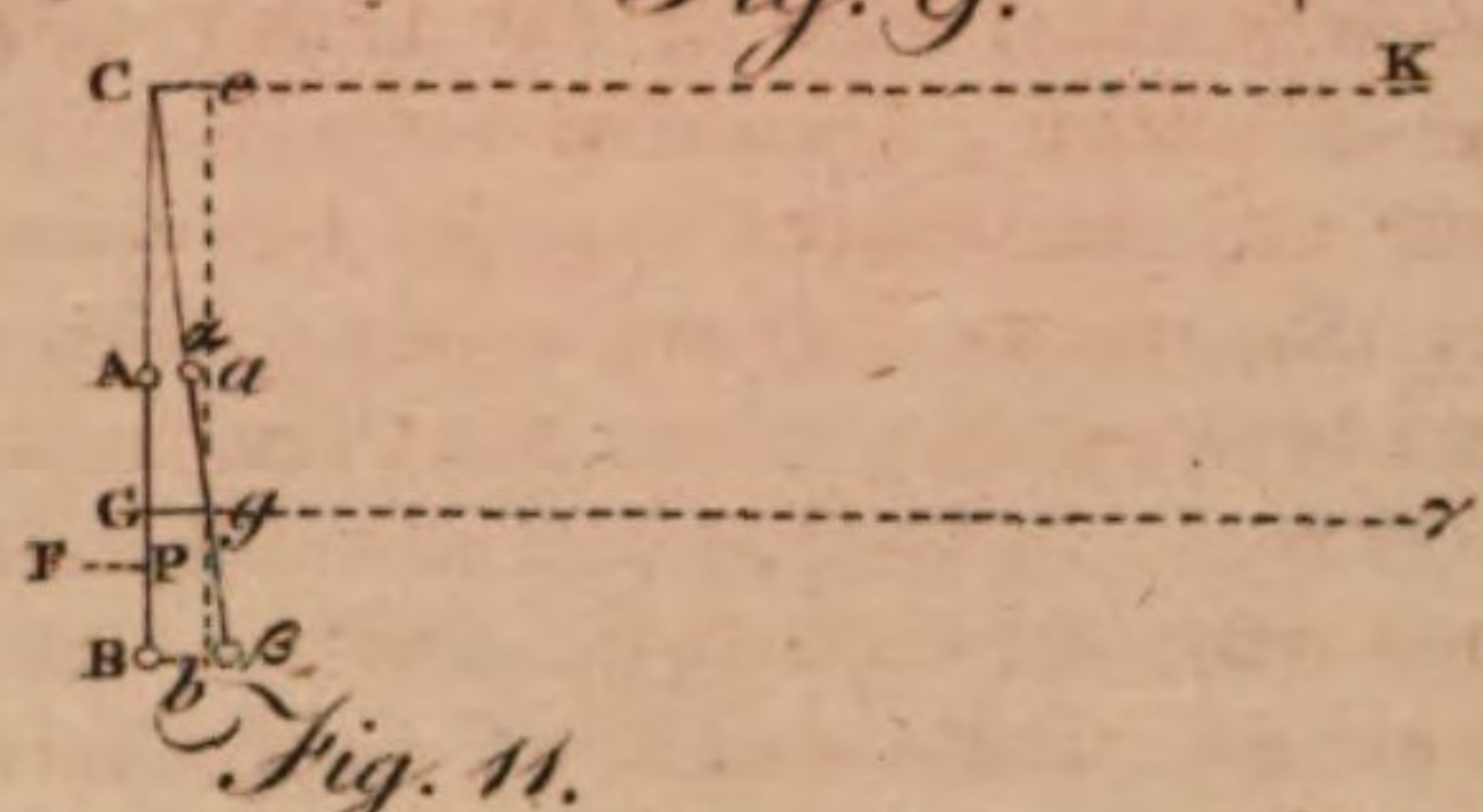
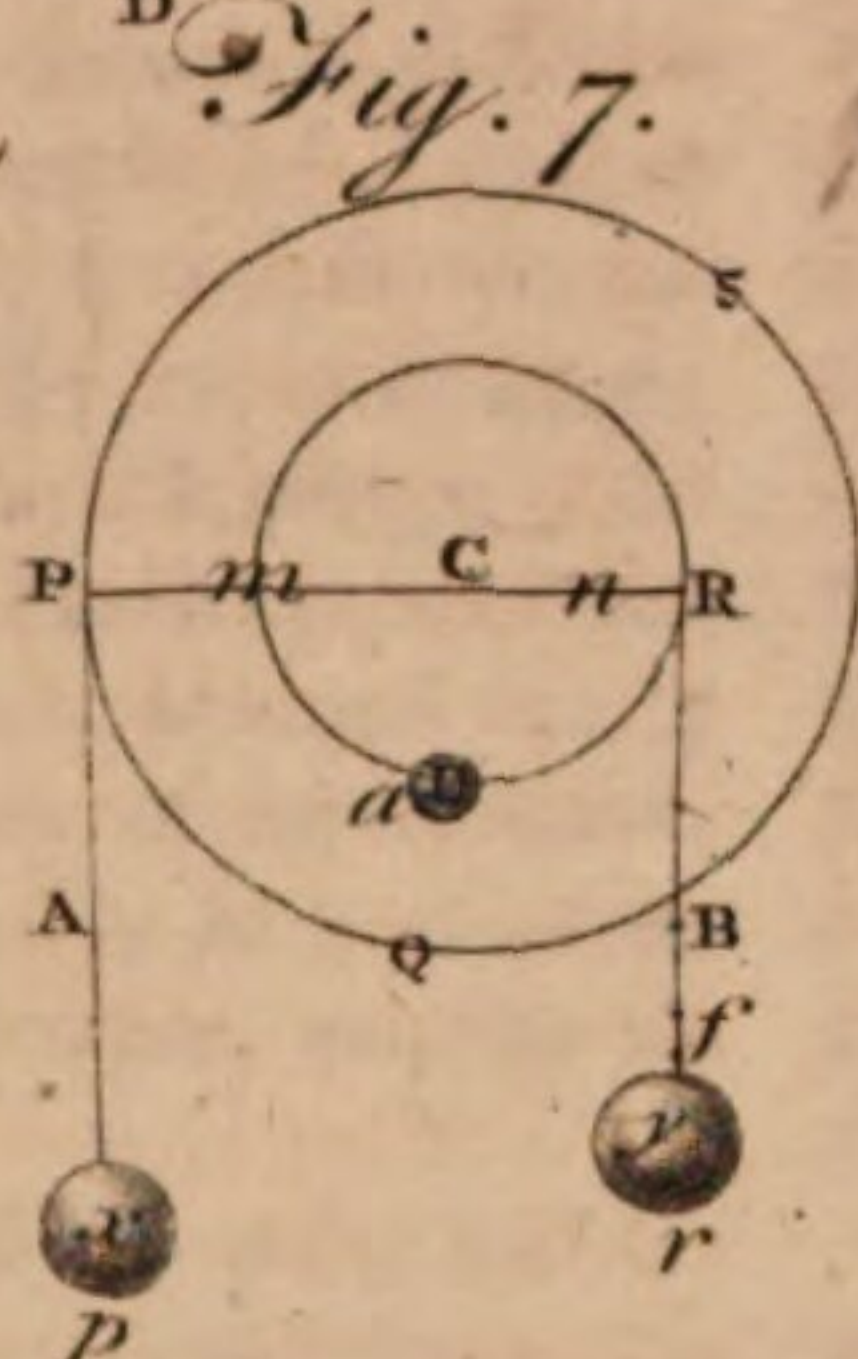
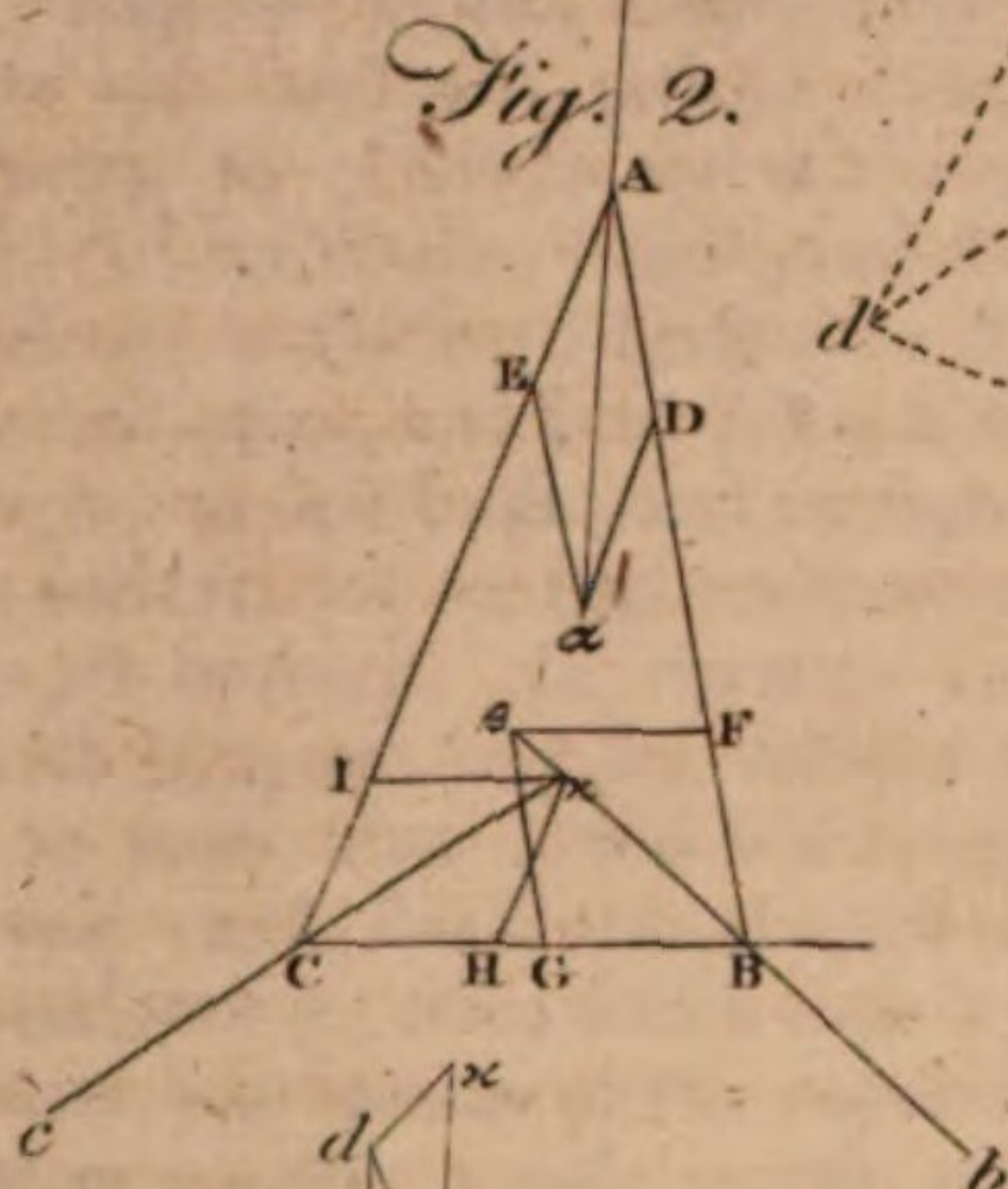
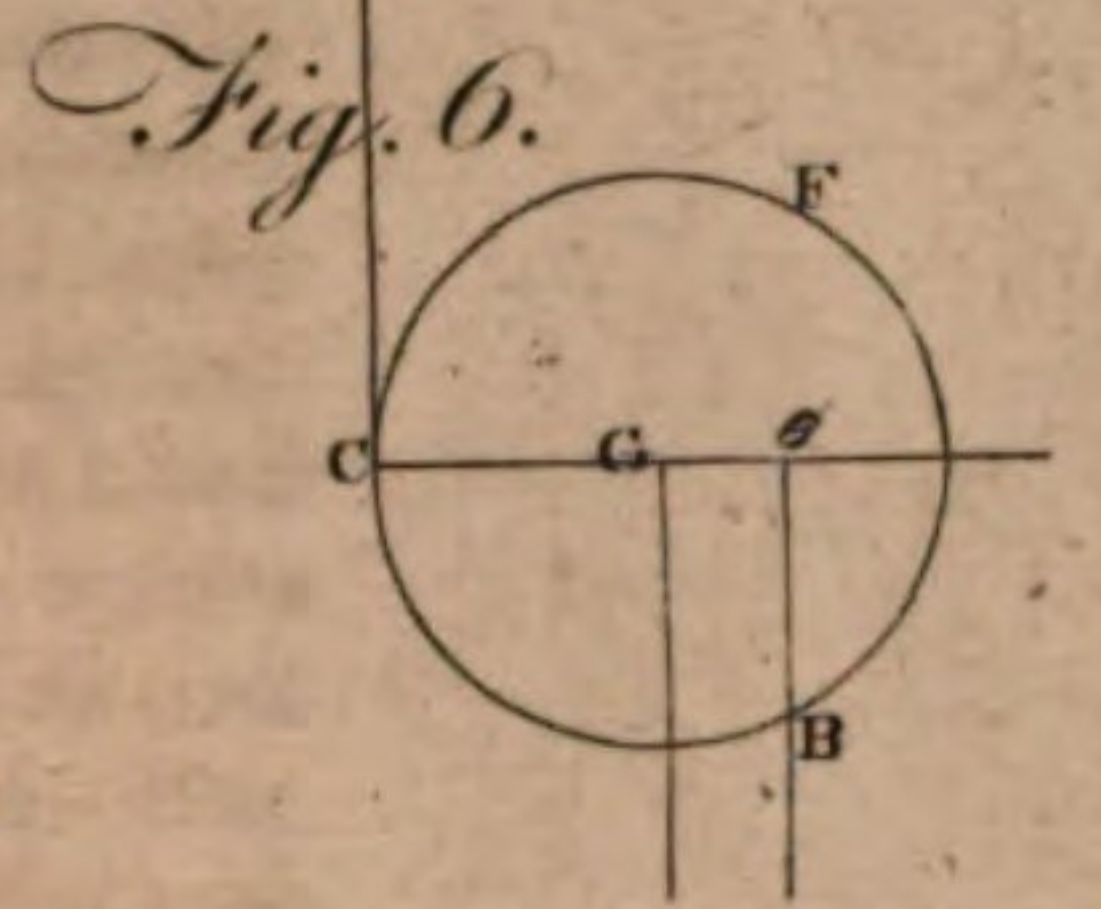
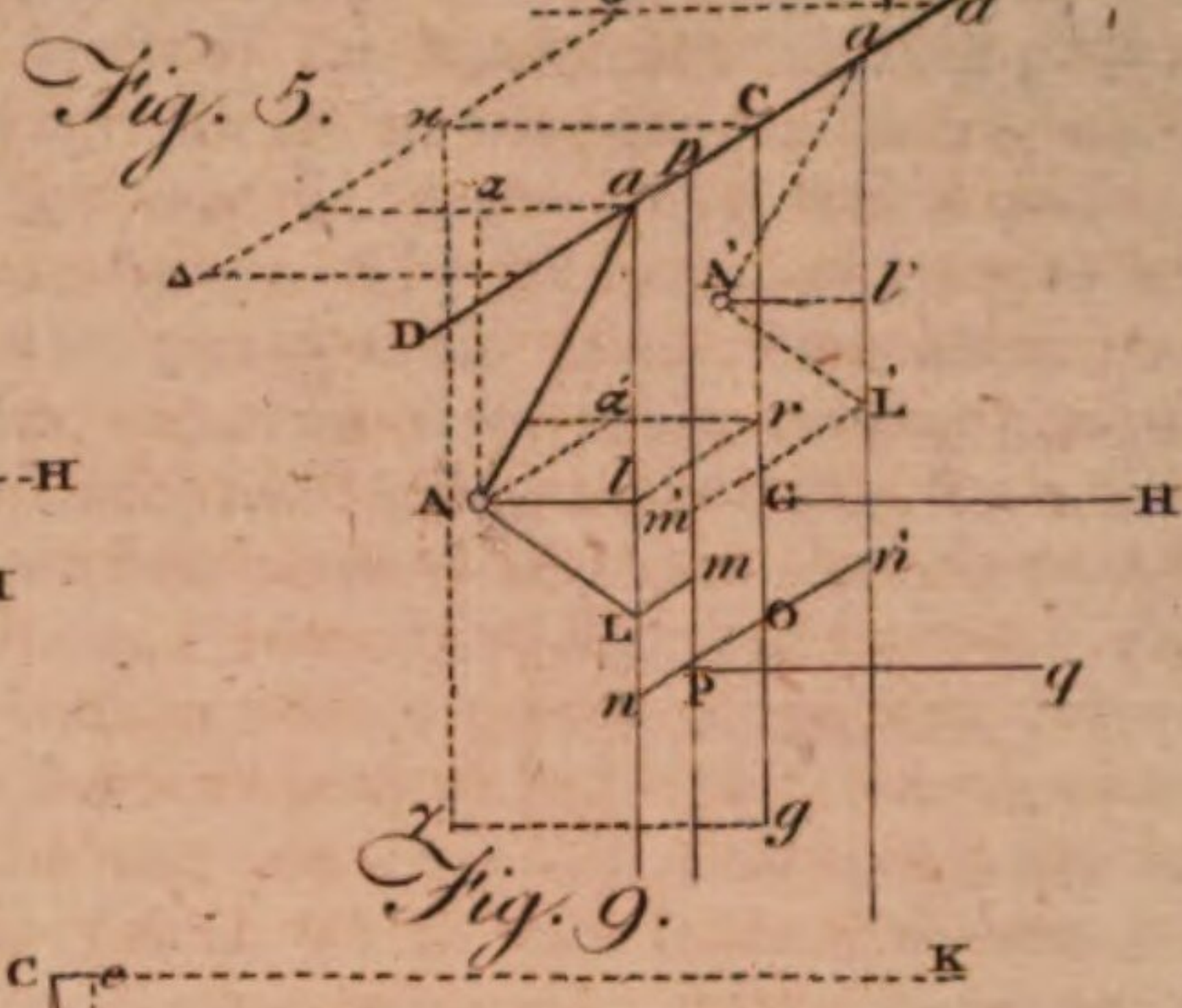
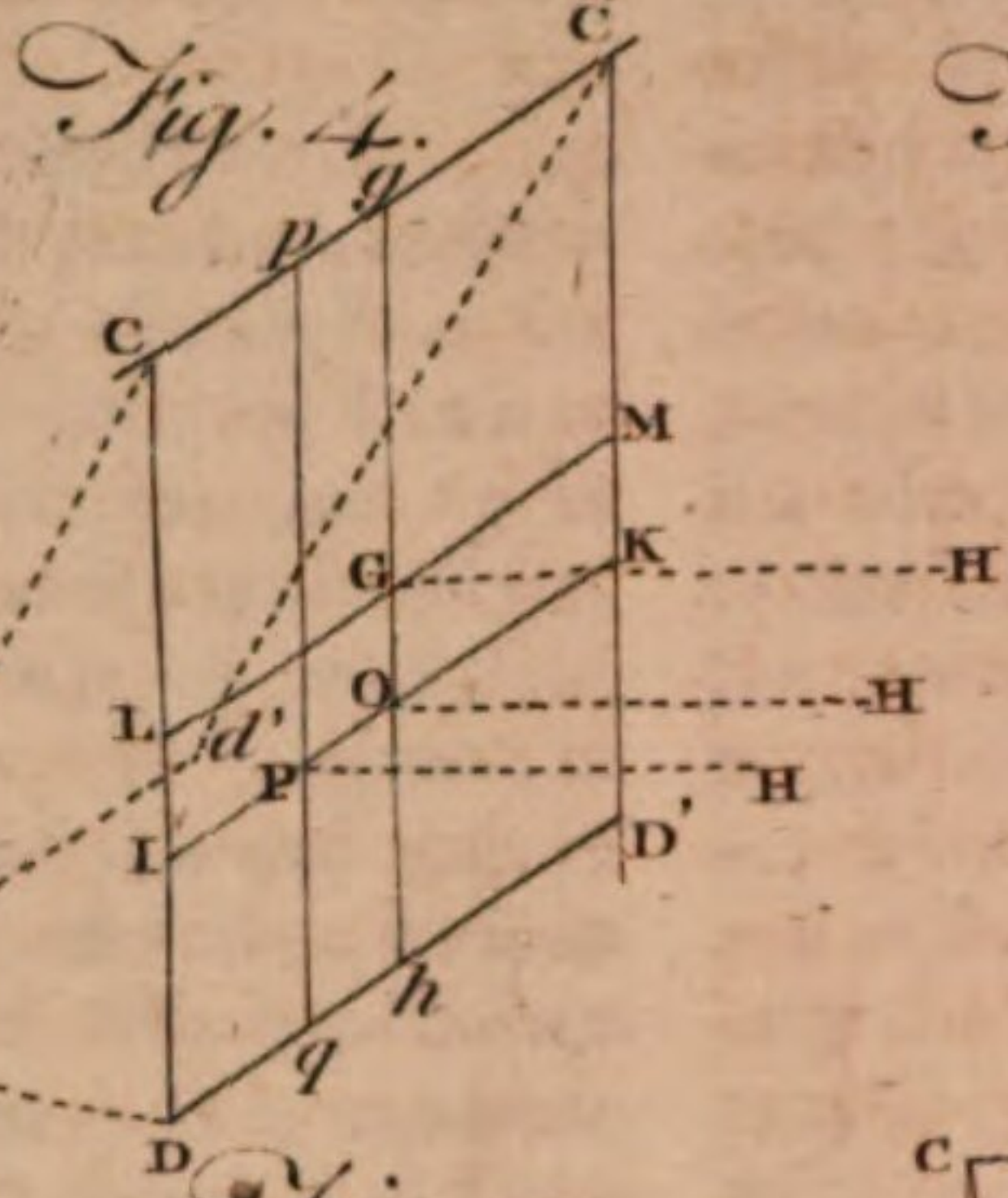
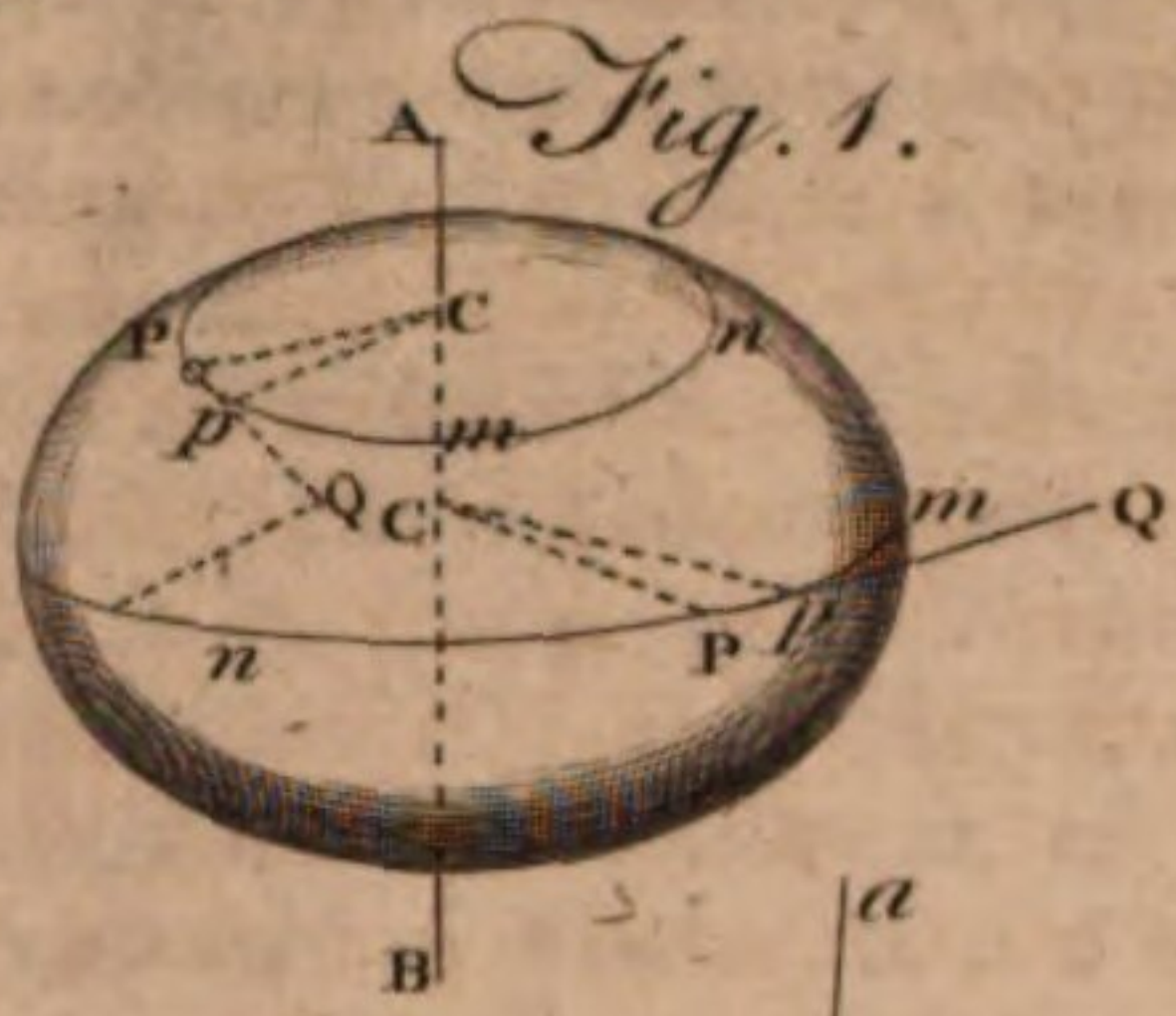
ROTONDO, or ROTUNDO, in architecture, an appellation given to any building that is round both within and without; whether it be a church, a saloon, or the like. The most celebrated rotundo of the ancients is the pantheon at Rome. See PANTHEON.

ROTTEN-STONE, a mineral found in Derbyshire, and

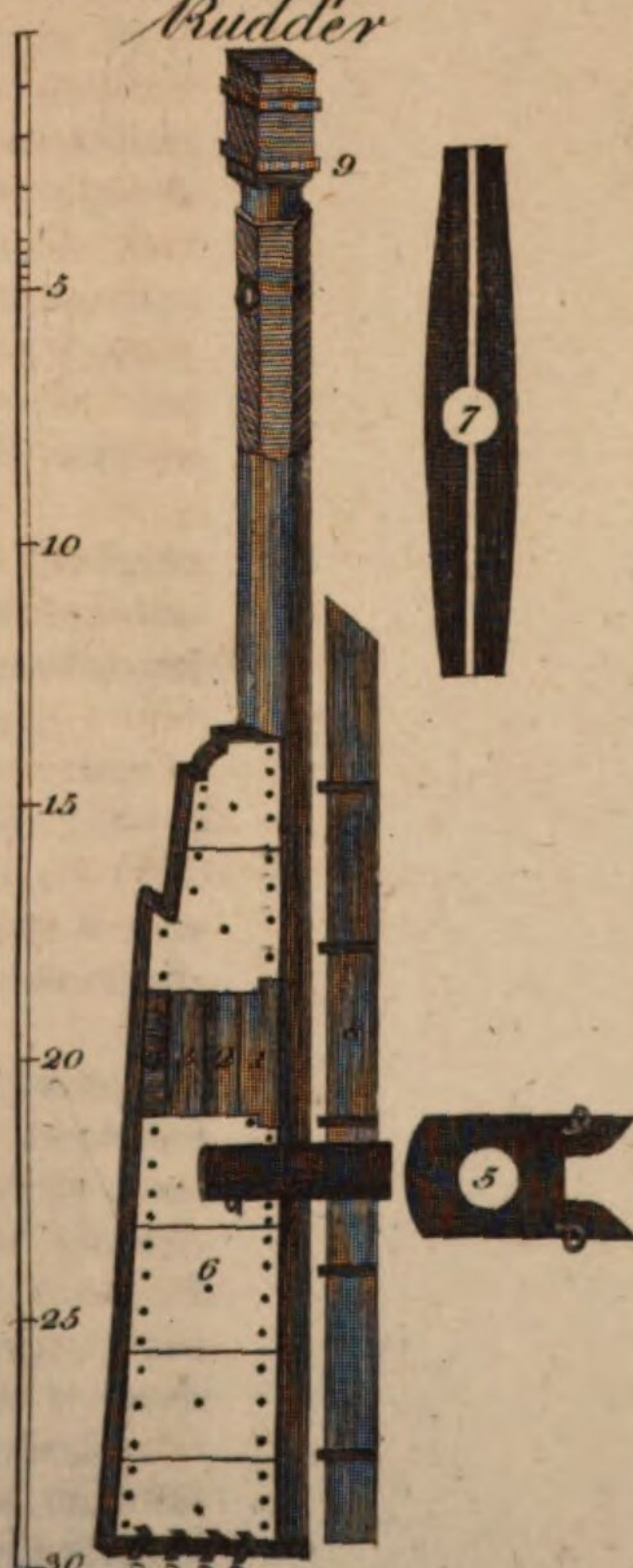
Rotheram
||
Rotten-
stone.

ROTATION.

Plate CCCCXLIII.



Substitute for a Rudder



A. Bell. Prin. Wal. Sculptor fecit

Rottenness, and used by mechanics for all sorts of finer grinding and polishing, and sometimes for cutting of stones. According to Ferber, it is a tripoli mixed with calcareous earth.

ROTTENNESS. See PUTREFACTION.

ROTTERDAM, is a city in the province of Holland, in E. Long. 4. 20. N. Lat. 52. situated on the north bank of the river Maese, about 37 miles south of Amsterdam, nine south-east of the Hague, and 15 to the eastward of Briel. It is a large and populous city, of a triangular figure, handsomely built of brick, the streets wide and well paved. There are ten gates to the town, six of which are at the land side and four at the side of the Maese. It is supposed to take its name from the *Roter*, or *Rotter*, a little river that falls into the canals of this city, and from *Dam*, a dike. It is uncertain when it was first built; and though it is supposed to be very ancient, yet we find no mention made of it before the 13th century. In the year 1270 it was surrounded with ramparts, and honoured with several privileges; but 27 years after it was taken by the Flemings. In the year 1418, Brederode chief of the Haeks made himself master of it; since which time it has continued yearly to increase by means of the conveniency of its harbour. Its arms are vert, a pale argent, quarterly in a chief on the first and third, or, a lion spotted sable, on the second and fourth a lion spotted gules.

Rotterdam is not reckoned one of the principal cities of the province, because it has not been always in its present flourishing condition. The Dutch call it the first of the second rank, whereas it ought to be esteemed the second of the first, being, next to Amsterdam, the most trading town in the United Provinces. Its port is very commodious; for the canals, which run through most parts of the town, bring the ships, some of 200 or 300 ton, up to the merchants door; a conveniency for loading and unloading which is not to be found in other places. The great ships go up into the middle of the town by the canal into which the Maese enters by the old head, as it comes out by the new. A stranger, upon his first entering this place, is astonished at the beautiful confusion of chimneys intermixed with tops of trees with which the canals are planted, and streamers of vessels; insomuch that he can hardly tell whether it be fleet, city, or forest. The Haring Vliet is a very fine street; most of the houses are new, and built of hewn stone; but the grandest as well as most agreeable street in Rotterdam is the Bomb Quay, which lies parallel with the Maese; on one side it is open to the river, and the other is ornamented with a grand facade of the best houses in the city, inhabited chiefly by the English; they are five or six stories high, massy and very clumsy: wherever there is any attempt at ornament, it is the worst that can be conceived. One sees no Grecian architecture, except Doric entablatures, stuck upon the top of the upper story, without pilasters; Ionic volutes, turned often the wrong way, and an attempt at Corinthian capitals, without any other part of the order. The doors are large, and stuck with great knobs and clumsy carving; you ascend to them, not in front, but by three or four steps going up on each side, and you are assisted by iron rails of a most immense thickness. These houses are almost all window; and the window shutters and frames being painted green, the glass has all a green cast, which is

helped by the reflection from the trees that overshadow Rotterdam. their houses, which, were it not for this circumstance, would be intolerably hot, from their vicinity to the canals. Most of the houses have looking-glasses placed on the outsides of the windows, on both sides, in order that they may see every thing which passes up and down the street. The stair-cases are narrow, steep, and come down almost to the door. In general, the houses rise with enormous steep roofs, turning the gable end to the street, and leaning considerably forward, so that the top often projects near two feet beyond the perpendicular. The Bomb Quay is so broad, that there are distinct walks for carriages and foot-passengers, lined and shaded with a double row of trees.—You look over the river on some beautiful meadows, and a fine avenue of trees, which leads to the Pest-house: it seems to be an elegant building, and the trees round it are so disposed as to appear a thick wood. This street is at least half a mile in length, and extends from the old to the new head, the two places where the water enters to fill the canals of this extensive city. When water runs through a street, it then assumes the name of a canal, of which kind the Heeren-fleet has the pre-eminence; the houses are of free-stone, and very lofty; the canal is spacious, and covered with ships: at one end stands the English church, a neat pretty building, of which the bishop of London is ordinary.

This port is much more frequented by the British merchants than Amsterdam, insomuch that, after a frost, when the sea is open, sometimes 300 sail of British vessels sail out of the harbour at once. There is always a large number of British subjects who reside in this town, and live much in the same manner as in Great Britain. The reason of the great traffic between this place and England, is because the ships can generally load and unload, and return to England from Rotterdam, before a ship can get clear from Amsterdam and the Texel. Hence the English merchants find it cheaper and more commodious, after their goods are arrived at Rotterdam, to send them in boats over the canals to Amsterdam. Another great advantage they have here for commerce is, that the Maese is open, and the passage free from ice, much sooner in the spring than in the Y and Zuyder-sea, which lead to Amsterdam.

The glass-house here is one of the best in the seven provinces; it makes abundance of glass-toys and enamelled bowls, which are sent to India, and exchanged for china-ware, and other oriental commodities.

The college of admiralty here is called the *college of the Maese*, the chief of all Holland and the United Provinces. The lieutenant-general, admiral of Holland, is obliged to go on board of a Rotterdam ship in the Maese when he goes to sea, and then he commands the Squadron of the Maese.

On the east side of the city there is a large basin and dock, where ship-carpenters are continually employed for the use of the admiralty, or of the East India company. But the largest ships belonging to the admiralty of Rotterdam are kept at Helvoetsluys, as the most commodious station, that place being situated on the ocean; for it requires both time and trouble to work a large ship from the dock of Rotterdam to the sea.

Rotterdam has four Dutch churches for the established religion. There is one thing very remarkable in

Rotterdam in respect to the great church, that the tower which leaned on one side was set up straight in the year 1655, as appears by the inscription engraved on brass at the bottom of the tower withinside. In the choir of this church are celebrated, with no small solemnity, the promotions made in the Latin schools. Besides, there are two English churches, one for those of the church of England and the other for the Presbyterians; and one Scotch church; as likewise one Lutheran, two Arminian, two Anabaptist, four Roman Catholic chapels, and one Jewish synagogue.

Though the public buildings here are not so stately as those of Amsterdam and some other cities, yet there are several of them well worth seeing. The great church of St Laurence is a good old building, where are many stately monuments of their old admirals. From the top of this church one may see the Hague, Delft, Leyden, Dort, and most of the towns of south Holland. There are several fine market-places, as three fish-markets, the great market, the new-market, and the hogs-market. The Stadthouse is an old building, but the chambers large and finely adorned. The magazines for fitting out their ships are very good structures. The Exchange is a noble building, begun in the year 1720, and finished in 1736. Upon the Great Bridge in the market-place there is a fine brass statue erected to the great Erasmus, who was born in this city in 1467, and died at Basil in Switzerland. He is represented in a furred gown, and a round cap, with a book in his hand. The statue is on a pedestal of marble, surrounded with rails of iron. Just by, one may see the house where this great man was born, which is a very small one, and has the following distich written on the door:

*Ædibus his ortus, mundum decoravit, Erasmus,
Artibus, ingenio, religione, fide.*

Rotterdam and the whole of the United Provinces are now in the possession of the French Republic. See **REVOLUTION** and **UNITED PROVINCES**.

ROTULA, in anatomy, the small bone of the knee, called also *patella*.

ROTUNDUS, in anatomy, a name given to several muscles otherwise called *teres*.

ROUAD. See **ARADUS**.

ROUANE, or **ROANE**, an ancient and considerable town of France, in Lower Forez, with the title of a duchy; seated on the river Loire, at the place where it begins to be navigable for boats. E. Long. 4. 9. N. Lat. 46. 2.

ROUCOU, in dyeing, the same with **ANOTTA** and **BIXA**.

ROUEN, a city of France, and capital of Normandy, had an archbishop's see, a parliament, a mint, a handsome college, an academy, two abbeys, and an old castle. It is seven miles in circumference, and surrounded with six suburbs; and contained before the revolution 35 parishes, and 24 convents for men and women. The metropolitan church has a very handsome front, on which are two lofty steeples, whence there is a fine view of the town and country. The great bell is 13 feet high and 11 in diameter. The church of the Benedictine abbey is much admired by travellers. The parliament-house is adorned with beautiful tapestry and fine pictures. There are a great number of foun-

tains, though the houses are ordinary; but the walk upon the quay is very pleasant, and there are 13 gates from thence into the city. The number of the inhabitants are about 60,000, and they have several wool-len manufactures. It is seated on the river Seine; and the tide rises so high, that vessels of 200 tons may come up to the quay: but one of the greatest curiosities is the bridge, of 270 paces in length, supported by boats, and consequently is higher or lower according to the tide. It is paved, and there are ways for foot-passengers on each side, with benches to sit upon; and coaches may pass over it at any hour of the day or night. It is often called *Roan* by English historians; and is 50 miles south-west of Amiens, and 70 north-west of Paris.

Though large, and enriched by commerce, Rouen is not an elegant place. The streets are almost all narrow, crooked, and dirty; the buildings old and irregular. It was fortified by St Louis in 1253, but the walls are now demolished. The environs, more peculiarly the hills which overlook the Seine, are wonderfully agreeable, and covered with magnificent villas. E. Long. 1. 10. N. Lat. 49. 26.

ROVERE, or **ROVEREDO**, a strong town of the Tyrol, on the confines of the republic of Venice; seated on the river Adige, at the foot of a mountain, and on the side of a stream, over which there is a bridge, defended by two large towers and a strong castle, 10 miles south of Trent. The town is tolerably well built, and governed by a chief magistrate, styled a *Podestat*. There are several churches and convents, that contain nothing worthy of notice. The most remarkable thing, and what they call the great wonder of Roveredo, is its spinning-house for a manufacture of silk, in which they have a great trade here to the fairs of Bolzano. They have also a very good trade in wine. Betwixt Trent and Roveredo is the strong fort of Belem, belonging to the house of Austria. It is situated on a rock, and commands the roads at the foot of the mountain. E. Long. 11. 1. N. Lat. 46. 12.

ROUERGUE, a province of France, in the government of Guienne; bounded on the east by the Cevennes and Gevaudan, on the west by Querci, on the north by the same and Auvergne, and on the south by Languedoc. It is 75 miles in length, and 50 in breadth; not very fertile, but feeds a number of cattle, and has mines of copper, iron, alum, vitriol, and sulphur. It is divided into a county, and the upper and lower marche. Rhodéz is the capital town.

ROVIGNO, a populous town of Italy, in Istria, with two good harbours, and quarries of fine stone. It is seated in a territory which produces excellent wine, in a peninsula on the western coast. E. Long. 13. 53. N. Lat. 45. 14.

ROVIGO, is a town of Italy, in the territory of Venice, and capital of the Polesin di Rovigo, in E. Long. 12. 25. N. Lat. 45. 6. It is a small place, poorly inhabited, and encompassed with ruinous walls. Formerly it belonged to the duke of Ferrara, but has been subject to the Venetians since 1500, and is famous for being the birth-place of that learned man Coelius Rhodoginus. It was built upon the ruins of Adria, anciently a noble harbour one mile from Rovigo, that gave name to the gulph, but now a half-drowned village, inhabited by a few fishermen.

ROUND.

Rouen

Rovigo.

Roundelay
||
Rounds.

ROUNDELEY, or **ROUND**, a sort of ancient poem, derived its name, according to Menage, from its form, and because it still turns back again to the first verse, and thus goes round. The common roundelay consists of 13 verses, eight of which are in one rhyme and five in another. It is divided into couplets; at the end of the second and third of which the beginning of the roundelay is repeated; and that, if possible, in an equivocal or punning sense. The roundelay is a popular poem in France, but is little known among us. Marot and Voiture have succeeded the best in it. Rapin remarks, that if the roundelay be not very exquisite, it is intolerably bad. In all the ancient ones, Menage observes, that the verse preceding has a less complete sense, and yet joins agreeably with that of the close, without depending necessarily thereon. This rule, well observed, makes the roundelay more ingenious, and is one of the finesses of the poem. Some of the ancient writers speak of the roundelay or roundel as a kind of air appropriated to dancing; and in this sense the term seems to indicate little more than dancing in a circle with the hands joined.

ROUND-HOUSE, a kind of prison for the nightly watch in London to secure disorderly persons till they can be carried before a magistrate.

ROUND-HOUSE, in a ship, the uppermost room or cabin on the stern of a ship, where the master lies.

ROUNDS, in military matters, a detachment from the main-guard, of an officer or a non-commissioned officer and six men, who go round the rampart of a garrison, to listen if any thing be stirring without the place, and to see that the centinels be diligent upon their duty, and all in order. In strict garrisons the rounds go every half-hour. The centinels are to challenge at a distance, and to rest their arms as the round passes. All guards turn out, challenge, exchange the parole, and rest their arms, &c.

ROUNDS are ordinary and extraordinary. The ordinary rounds are three; the town-major's round, the grand-round, and the visiting-round.

Manner of going the ROUNDS. When the town-major goes his round, he comes to the main-guard, and demands a serjeant and four or six men to escort him to the next guard; and when it is dark, one of the men is to carry a light.

As soon as the sentry at the guard perceives the round coming, he shall give notice to the guard, that they may be ready to turn out when ordered; and when the round is advanced within about 20 or 30 paces of the guard, he is to challenge briskly; and when he is answered by the serjeant who attends the round, *Town-major's round*, he is to say, *Stand round!* and rest his arms; after which he is to call out immediately, *Serjeant, turn out the guard, town-major's round.* Upon the sentry calling, the serjeant is to turn out the guard immediately, drawing up the men in good order with shouldered arms, the officer placing himself at the head of it, with his arms in his hand. He then orders the serjeant and four or six men to advance toward the round, and challenge: the serjeant of the round is to answer, *Town-major's round*; upon which the serjeant of the guard replies, *Advance, serjeant, with the parole!* at the same time ordering his men to rest their arms. The serjeant of the round advances alone, and gives the serjeant of the guard the pa-

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role in his ear, that none else may hear it; during which period the serjeant of the guard holds the spear of his halbert at the other's breast. The serjeant of the round then returns to his post, whilst the serjeant of the guard leaving his men to keep the round from advancing, gives the parole to his officer. This being found right, the officer orders his serjeant to return to his men; says, *Advance, town-major's round!* and orders the guard to rest their arms; upon which the serjeant of the guard orders his men to wheel back from the centre, and form a lane, through which the town-major is to pass (the escort remaining where they were), and go up to the officer and give him the parole, laying his mouth to his ear. The officer holds the spear of his esparton at the town major's breast while he gives him the parole.

The design of rounds is not only to visit the guards, and keep the centinels alert; but likewise to discover what passes in the outworks, and beyond them.

ROUSSILLON, a province of France, in the Pyrenees, bounded on the east by the Mediterranean sea, on the west by Cerdagne, on the north by Lower Languedoc, and on the south by Catalonia, from which it is separated by the Pyrenees. It is a fertile country, about 50 miles in length, and 25 in breadth, and remarkable for its great number of olive-trees. Perpignan is the capital town.

ROUSSEAU (James), an eminent painter, was born at Paris in the year 1630, and studied first under Swanvelt, who had married one of his relations; after which he improved himself by travelling into Italy, practising solely in perspective, architecture, and landscape. On his return home, he was employed at Marly. He distinguished himself very much in painting buildings, and by his knowledge of, and attention to, the principles of perspective. Louis XIV. employed him to decorate his hall of devices at St Germain-en-Laye, where he represented the operas of Lulli. But being a Protestant, he quitted France on the persecution of his brethren, and retired to Switzerland. Louis invited him back; he refused, but sent his designs, and recommended a proper person to execute them. After a short stay in Switzerland, he went to Holland; whence he was invited over to England by Ralph duke of Montague, to adorn his new house in Bloomsbury, where he painted much. Some of his pictures, both in landscape and architecture, are over doors at Hampton-court; and he etched some of his own designs. His perspectives having been most commonly applied to decorate courts or gardens, have suffered much from the weather. Such of them as remain are monuments of an excellent genius. The colours are durable and bright, and the choice of them most judicious. He died in Soho-square, about the year 1693, aged 63.

ROUSSEAU (John Baptist), a celebrated French poet, was born at Paris in April 1671. His father, who was a shoemaker in good circumstances, made him study in the best colleges of Paris, where he distinguished himself by his abilities. He at length applied himself entirely to poetry, and soon made himself known by several short pieces, that were filled with lively and agreeable images, which made him sought for by persons of the first rank, and men of the brightest genius. He was admitted in quality of *élève*, or pupil, into the academy of Inscriptions and Belles Lettres, in 1701,

Rousseau and almost all the rest of his life attached himself to some of the great lords. He attended marshal Tallard into England, in quality of secretary, and here contracted a friendship with St Evremond. At his return to Paris, he was admitted into the politest company, lived among the courtiers, and seemed perfectly satisfied with his situation; when, in 1708, he was prosecuted for being the author of some couplets, in which the characters of several persons of wit and merit were blackened by the most atrocious calumnies. This prosecution made much noise; and Rousseau was banished in 1712 out of the kingdom, to which he was never more to return, by a decree of the parliament of Paris. However, he always steadily denied, and even on his death-bed, his being the author of these couplets.—From the date of this sentence he lived in foreign countries, where he found illustrious protectors. The count de Luc, ambassador of France, in Switzerland, took him into his family, and studied to render his life agreeable. He took him with him to the treaty of Baden in 1714, where he was one of the plenipotentiaries, and presented him to prince Eugene, who entertaining a particular esteem for him, took him to Vienna, and introduced him to the emperor's court. Rousseau lived about three years with prince Eugene; but having lost his favour by satirising one of his mistresses, he retired to Brussels, where he afterwards usually resided, and where he met with much attention and much generosity, as we shall soon mention.—It was here that his disputes with Voltaire commenced, with whom he had become acquainted at the college of Louis the Great, who then much admired his turn for poetry. At that time Voltaire assiduously cultivated the acquaintance of Rousseau, and made him a present of all his works; and Rousseau, flattered by his respect, announced him as a man who would one day be a glory to the age. The author of the *Henriad* continued to consult him about his productions, and to lavish on him the highest encomiums, while their friendship daily increased. When they again met at Brussels, however, they harboured the blackest malice against one another. The cause of this enmity, as Rousseau and his friends tell the story, was a lecture which he had composed from his *Epistle to Julia*, now *Urania*. This piece frightened Voltaire, as it plainly discovered his rage against him. The young man, vexed at these calumnies, understood the whole as thrown out against him. This is what Rousseau asserts. But his adversaries, and the friends of the poet whom he cried down, suspected him, perhaps rather rashly, of having employed sarcasms, because he thought that his own reputation was in danger of being eclipsed by that of his rival. What is very singular, these two celebrated characters endeavoured each of them to prepossess the public with a bad opinion of the other, which they themselves never entertained in reality, and to smother in their breast that esteem for each other which, in defiance of all their exertions, still held its place. Rousseau, from the period of this dispute, always represented Voltaire as a buffoon, as a writer possessing neither taste nor judgment, who owed all his success to a particular mode which he pursued. As a poet he considered him as inferior to Lucan, and little superior to Pradon. Voltaire treated him still worse. Rousseau, according to him, was nothing better than a plagiarist,

who could make shift to rhyme, but could not make any reflections; that he had nothing but the talent of arranging words, and that he had even lost that in foreign countries. He thus addresses him, in a piece little known:

*Aussitôt le Dieu qui m'inspire
T'arracha le luth et la lyre
Qu'avoient déshonorés tes mains;
Tu n'es plus qu'un reptile immonde,
Rebut du Parnasse et du monde
Enfêveli dans tes venins.*

In consequence of the little esteem in which Rousseau was held at Brussels, he could never forget Paris. The grand-prior of Vendome, and the baron de Breteuil, solicited the regent duke of Orleans to allow him to return; which favour was obtained. But our poet, before he would make use of the *lettres de rappel* issued in his favour, demanded a review of his process, which he wished to be repealed, not as a matter of favour, but by a solemn judgment of court; but his petition was refused. He then came over, in 1721, to England, where he printed *A Collection of his Works*, in 2 vols 12mo, at London. This edition, published in 1723, brought him near 10,000 crowns, the whole of which he placed in the hands of the Ostend company. The affairs of this company, however, soon getting into confusion, all those who had any money in their hands lost the whole of it, by which unfortunate event Rousseau, when arrived at that age when he stood most in need of the comforts of fortune, had nothing to depend upon but the generosity of some friends. Boutet, public notary in Paris, was peculiarly generous and attentive to him. He found a still greater asylum in the Duke d'Arenberg, whose table was open to him at all times; who being obliged in 1733 to go into the army in Germany, settled on him a pension of 1500 livres. But unfortunately he soon lost his good opinion, having been imprudent enough to publish in a Journal (of which Voltaire accused him), that the duke d'Arenberg was the author of those verses for which he himself had been banished France. He was therefore dismissed from his table, and his pride would not allow him to accept of the pension after this rupture. Brussels now became insupportable to him; and the count du Luc, and M. de Senozan, receiver-general of the church revenue, being informed of his disappointments, invited him to come privately to Paris, in the hopes of procuring a diminution of the period of his banishment. Some time previous to this Rousseau had published two new letters; one to P. Brumoi, on tragedy; the other to Rollin, on history. It is said, he expected from his letter to Brumoi to get the favour of all the Jesuits; and from the one to Rollin, the patronage of the Jansenists. He had likewise written an Ode, in praise of Cardinal de Fleury, on Peace, which met with a favourable reception, although it was not equal to some of his former pieces. He imagined his return to Paris would be found no difficult matter. He attempted it, and found he could not obtain a pass for a single year. Some say, that Rousseau had irritated some persons in power, by an allegory, called *The Judgment of Pluto*; in which piece he describes one of the principal judges, whose

Rousseau, whose skin Pluto had caused to be taken off, and stretched out on the seat in the bench. This satire, joined to the secret machinations of enemies, rendered all the attempts of his friends to procure his return abortive. After having staid three months at Paris, he returned to Brussels in February 1740, at which place he died March 17. 1741, strongly impressed with religious sentiments. Immediately before he received the viaticum, he protested he was not the author of those horrid verses which had so much embittered his life; and this declaration, in the opinion of the virtuous part of mankind, will be considered as a sufficient proof of his innocence. Some have said that Rousseau was profane, troublesome, capricious, forward, vindictive, envious, a flatterer, and a satirist. Others again represent him as a man full of candour and openness, a faithful and grateful friend, and as a Christian affected with a sense of religion.—Amidst such widely varied accounts it is difficult to form an opinion of his character. Such of our readers as wish to know more of this great poet may consult the Dictionary of M. Chaupepié, written with as much precision as impartiality, who endeavours to give a just idea of his character. From what he says, it does not appear that Rousseau can be cleared from the accusation brought against him of having attacked his benefactors. We believe he may be much more easily freed from the imputation brought against him by some of having disowned his father: for what occasion had Rousseau to conceal the obscurity of his birth? It exalted his own merit.

M. Seguy, in concert with M. the prince of la Tour Tassis, has given a very beautiful edition of his works, agreeable to the poet's last corrections. It was published in 1743, at Paris, in 3 vols. 4to, and in 4 vols. 12mo, containing nothing but what was acknowledged by the author as his own. It contains, 1. Four Books of Odes, of which the first are sacred odes, taken from the Psalms. "Rousseau (says Freron) unites in himself Pindar, Horace, Anacreon, and Malherbe. What fire, what genius, what flights of imagination, what rapidity of description, what variety of affecting strokes, what a crowd of brilliant comparisons, what richness of rhymes, what happy versification; but especially what inimitable expression! His verses are finished in the highest style of perfection that French verse is capable of assuming." The lyric compositions of Rousseau are, in general, above mediocrity. All his odes are not, however, of equal merit. The most beautiful are those which he has addressed to count du Luc, to Malherbe, to prince Eugene, to Vendôme, to the Christian princes; his Odes on the death of the prince de Conti, on the battle of Peterwaradin; and the Ode to Fortune, altho' there are certainly some few weak stanzas to be met with in it. There is considerable neatness in the composition of the Ode to a Widow, in his stanzas to the Abbé de Chaulieu, in his addresses to Rossignol, in his Odes to count de Bonneval, to M. Duche, and to count de Sinzindorf; and it is to be lamented that he wrote so few pieces of this kind, from which his genius seemed to lead him with difficulty. 2. Two books of Epistles, in verse. Although these do not want their beauties, yet there prevails too much of a misanthropic spirit in them, which takes away greatly from their excellence. He makes too frequent mention of his enemies and his mis-

fortunes; he displays those principles which are supported less on the basis of truth than on those various passions which ruled his mind at the time. He puts forth his anger in paradoxes. If he be reckoned equal to Horace in his odes, he is far inferior in his epistles. There is much more philosophy in the Roman poet than in him. 3. *Cantatas*. He is the father of this species of poetry, in which he stands unrivalled. His pieces of this sort breathe that poetical expression, that picturesque style, those happy turns, and those easy graces, which constitute the true character of this kind of writing. He is as lively and impetuous as he is mild and affecting, adapting himself to the passions of those persons whom he makes to speak. "I confess (says M. de la Harpe) that I find the cantatas of Rousseau more purely lyric than his odes, although he rises to greater heights in these. I see nothing in his cantatas but bold and agreeable images. He always addresses himself to the imagination, and he never becomes either too verbose or too prolix. On the contrary, in some of the best of his odes, we find some languishing stanzas, ideas too long delayed, and verses of inexcusable meanness." 4. *Allegories*, the most of which are happy, but some of them appear forced. 5. *Epigrams*, after the manner of Martial and Marot. He has taken care to leave out of this edition those pieces which licentiousness and debauchery inspired. They bear, indeed, as well as his other pieces, the marks of genius; but such productions are calculated only to dishonour their authors, and corrupt the heart of those who read them. 5. A book of *Poems on Various Subjects*, which sometimes want both ease and delicacy. The most distinguished are two eclogues, imitated from Virgil. 6. Four comedies in verse; the *Flatterer*, whose character is well supported; the *Imaginary Forefathers*, a piece which had much less success, although it affords sufficiently good sentiment; the *Capricious Man*, and the *Dupe of Herself*, pieces of very inconsiderable merit. 7. Three comedies in prose; the *Coffee-house*, the *Magic Girdle*, and the *Madragore*, which are little better than his other theatrical pieces. The theatre was by no means his forte; he had a genius more suited for satire than comedy, more akin to Boileau's than Moliere's. 8. A *Collection of Letters*, in prose. In this edition he has selected the most interesting.—There is a larger collection in 5 volumes. This last has done at the same time both injury and honour to his memory. Rousseau in it speaks both in favour of and against the very same persons. He appears too hasty in tearing to pieces the characters of those who displeased him. We behold in them a man of a steady character and an elevated mind, who wishes to return to his native country only that he might be enabled completely to justify his reputation. We see him again corresponding with persons of great merit and uncommon integrity, with the Abbé d'Olivet, Racine the son, the poets La Fosse and Duche, the celebrated Rollin, M. le Franc de Pompignan, &c. &c. We meet also with some anecdotes and exact judgments of several writers. A bookseller in Holland has published his port-folio, which does him no honour. There are, indeed, some pieces in this wretched collection which did come from the pen of Rousseau; but he is less to be blamed for them than they are who have drawn these works from that oblivion to which our great poet had

Rousseau. *consigned them. A pretty good edition of his *Selected Pieces* appeared at Paris in 1741, in a small 12mo volume. His portrait, engraved by the celebrated Aved, his old friend, made its appearance in 1778, with the following motto from Martial:*

Certior in nostro carmine vultus erit.

ROUSSEAU (John-James), was born at Geneva June 28. 1712. His father was by profession a clock and watch maker. At his birth, which, he says, was the first of his misfortunes, he endangered the life of his mother, and he himself was for a long time after in a very weak and languishing state of health; but as his bodily strength increased, his mental powers gradually opened, and afforded the happiest presages of future greatness. His father, who was a citizen of Geneva, was a well-informed tradesman; and in the place where he wrought he kept a Plutarch and a Tacitus, and these authors of course soon became familiar to his son. A rash juvenile step occasioned his leaving his father's house. "Finding himself a fugitive, in a strange country, and without money or friends, he changed (says he himself) his religion, in order to procure a subsistence." Bornex, bishop of Anneci, from whom he sought an asylum, committed the care of his education to Madame de Warrens, an ingenious and amiable lady, who had in 1726 left part of her wealth, and the Protestant religion, in order to throw herself into the bosom of the church. This generous lady served in the triple capacity of a mother, a friend, and a lover, to the new proselyte, whom she regarded as her son. The necessity of procuring for himself some settlement, however, or perhaps his unsettled disposition, obliged Rousseau often to leave this tender mother.

He possessed more than ordinary talents for music; and the Abbé Blanchard flattered his hopes with a place in the royal chapel, which he, however, failed in obtaining for him; he was therefore under the necessity of teaching music at Chamberi. He remained in this place till 1741, in which year he went to Paris, where he was long in very destitute circumstances. Writing to a friend in 1743, he thus expresses himself: "Every thing is dear here, but especially bread." What an expression; and to what may not genius be reduced! Meanwhile he now began to emerge from that obscurity in which he had hitherto been buried. His friends placed him with M. de Montaigu, ambassador from France to Venice. According to his own confession, a proud misanthropy and a peculiar contempt of the riches and pleasures of this world, constituted the chief traits in his character, and a misunderstanding soon took place between him and the ambassador. The place of depute, under M. Dupin, former-general, a man of considerable parts, gave him some temporary relief, and enabled him to be of some benefit to Madame de Warrens his former benefactress. The year 1750 was the commencement of his literary career. The academy of Dijon had proposed the following question: "Whether the revival of the arts and sciences has contributed to the refinement of manners?" Rousseau at first inclined to support the affirmative. "This is the *pons asinorum* (says a philosopher, at that time a friend of his), take the negative side of the question, and I'll promise you the greatest success."

His discourse against the sciences, accordingly, having been found to be the best written, and replete with the deepest reasoning, was publicly crowned with the approbation of that learned body. Never was a paradox supported with more eloquence; it was not however a new one; but he enriched it with all the advantages which either knowledge or genius could confer on it. Immediately after its appearance, he met with several opponents of his tenets, which he defended; and from one dispute to another, he found himself involved in a formidable train of correspondence, without having ever almost dreamed of such opposition. From that period he decreased in happiness as he increased in celebrity. His "Discourse on the causes of inequality among mankind, and on the origin of social compacts," a work full of almost unintelligible maxims and wild ideas, was written with a view to prove that mankind are equal; that they were born to live apart from each other; and that they have perverted the order of nature in forming societies. He bestows the highest praise on the state of nature, and depreciates the idea of every social compact. This discourse, and especially the dedication of it to the republic of Geneva, are the *chef-d'œuvres* of that kind of eloquence of which the ancients alone had given us any idea. By presenting this performance to the magistrates, he was received again into his native country, and reinstated in all the privileges and rights of a citizen, after having with much difficulty prevailed on himself to abjure the Catholic religion. He soon, however, returned to France, and lived for some time in Paris. He afterwards gave himself up to retirement, to escape the shafts of criticism, and follow after the regimen which the strangury, with which he was tormented, demanded of him. This is an important epoch in the history of his life, as it is owing to this circumstance, perhaps, that we have the most elegant works that have come from his pen. His "Letter to M. d'Alembert" on the design of erecting a theatre at Geneva, written in his retirement, and published in 1757, contains, along with some paradoxes, some very important and well-handled truths. This letter first drew down upon him the envy of Voltaire, and was the cause of those indignities with which that author never ceased to load him. What is singular in him, is, that although so great an enemy to theatrical representations himself, he caused a comedy to be printed, and in 1752 gave to the theatre a pastoral (The Village Conjuror), of which he composed both the poetry and music, both of them abounding with sentiment and elegance, and full of innocent and rural simplicity. What renders the Village Conjuror highly delightful to persons of taste, is that perfect harmony of words and music which everywhere pervades it; that proper connection among the parties who compose it; and its being perfectly correct from beginning to end. The musician hath spoken, hath thought, and felt like a poet. Every thing in it is agreeable, interesting, and far superior to those common affected and insipid productions of our modern petit-dramas. His Dictionary of Music affords several excellent articles; some of them, however, are very inaccurate. "This work (says M. la Borde), in his Essay on Music, has need to be written over again, to save much trouble to those who wish to study it, and prevent them from falling into errors, which it

Rousseau. it is difficult to avoid, from the engaging manner in which Rousseau drags along his readers." The passages in it which have any reference to literature may be easily distinguished, as they are treated with the agreeableness of a man of wit and the exactness of a man of taste. Rousseau, soon after the rapid success of his *Village Conjuror*, published a *Letter on French Music*, or rather *against French music*, written with as much freedom as liveliness. The exasperated partisans of French comedy treated him with as much fury as if he had conspired against the state. A crowd of insignificant enthusiasts spent their strength in outcries against him. He was insulted, menaced, and lampooned. Harmonic fanaticism went even to hang him up in effigy.

That interesting and tender style, which is so conspicuous throughout the *Village Conjuror*, animates several letters in the *New Heloise*, in six parts, published 1761, in 12mo. This epistolary romance, of which the plot is ill-managed, and the arrangement bad, like all other works of genius, has its beauties as well as its faults. More truth in his characters and more precision in his details were to have been wished. The characters, as well as their style, have too much sameness, and their language is too affected and exaggerated. Some of the letters are indeed admirable, from the force and warmth of expression, from an effervescence of sentiments, from the irregularity of ideas which always characterise a passion carried to its height. But why is so affecting a letter so often accompanied with an unimportant digression, an insipid criticism, or a self-contradicting paradox? Why, after having shone in all the energy of sentiment, does he on a sudden turn unaffecting? It is because none of the personages are truly interesting. That of St Preux is weak, and often forced. Julia is an assemblage of tenderness and pity, of elevation of soul and of coquetry, of natural parts and pedantry. Wolmar is a violent man, and almost beyond the limits of nature. In fine, when he wishes to change his style, and adopt that of the speaker, it may easily be observed that he does not long support it, and every attempt embarrasses the author and cools the reader. In the *Heloise*, Rousseau's unlucky talent of rendering every thing problematical, appears very conspicuous; as in his arguments in favour of and against duelling, which afford an apology for suicide, and a just condemnation of it: in his facility in palliating the crime of adultery, and his very strong reasons to make it abhorred: on the one hand, in declamations against social happiness; on the other, in transports in favour of humanity: here, in violent rhapsodies against philosophers; there, by a rage for adopting their opinions: the existence of God attacked by sophistry, and Atheists confuted by the most irrefragable arguments; the Christian religion combated by the most specious objections, and celebrated with the most sublime eulogies.

His *Emilia* afterwards made more noise than the new *Heloise*. This moral romance, which was published in 1762, in four vols. 12mo, treats chiefly of education. Rousseau wished to follow nature in every thing; and though his system in several places differs from received ideas, it deserves in many respects to be put in practice, and with some necessary modifications it has been so. His precepts are expressed with the force and dignity of a mind full of the leading truths of morality. If he has not always been virtuous, no body at least

has felt it more, or made it appear to more advantage. Every thing which he says against luxury shows the vices and conceited opinions of his age, and is worthy at once of Plato or of Tacitus. His style is peculiar to himself. He sometimes, however, appears, by a kind of affected rudeness and asperity, to ape at the mode of Montaigne, of whom he is a great admirer, and whose sentiments and expressions he often clothes in a new dress. What is most to be lamented is, that in wishing to educate a young man as a Christian he has filled his third volume with objections against Christianity. He has, it must be confessed, given a very sublime eulogium on the gospel, and an affecting portrait of its divine Author: but the miracles, and the prophecies which serve to establish his mission, he attacks without the least reserve. Admitting only natural religion, he weighs every thing in the balance of reason; and this reason being false, leads him into dilemmas very unfavourable to his own repose and happiness.

He dwelt from 1754 in a small house in the country near Montmorency; a retreat which he owed to the generosity of a farmer-general. The cause of his love for this retirement was, according to himself, "that invincible spirit of liberty which nothing could conquer, and in competition with which honours, fortune, and reputation, could not stand. It is true, this desire of liberty has occasioned less pride than laziness; but this indolence is inconceivable. Every thing startles it; the most inconsiderable reciprocalities of social life are to it insupportable. A word to speak, a letter to write, a visit to pay, things necessary to be done, are to me punishments. Hear my reasons. Although the ordinary intercourse between mankind be odious to me, intimate friendship appears to me very dear; because there are no mere ceremonies due to it; it agrees with the heart, and all is accomplished. Hear, again, why I have always shunned kindnesses so much; because every act of kindness requires a grateful mind, and I find my heart ungrateful, from this alone, that gratitude is a duty. Lastly, that kind of felicity which is necessary for me, is not so much to do that which I wish, as not to do what I wish, not to do." Rousseau enjoyed this felicity which he so much wished in his retirement. Without entirely adopting that too rigorous mode of life pursued by the ancient Cynics, he deprived himself of every thing that could in any measure add fuel to this wished-for luxury, which is ever the companion of riches, and which inverts even custom itself. He might have been happy in this retreat, if he could have forgot this public which he affected to despise; but his desire after a great name got the better of his self-love, and it was this thirst after reputation which made him introduce so many dangerous paragraphs in his *Emilia*.

The French parliament condemned this book in 1762, and entered into a criminal prosecution against the author, which forced him to make a precipitate retreat. He directed his steps towards his native country, which shut its gates upon him. Proscribed in the place where he first drew breath, he sought an asylum in Switzerland, and found one in the principality of Neuchâtel. His first care was to defend his *Emilia* against the mandate of the archbishop of Paris, by whom it had been anathematized. In 1763 he published a letter, in which he re-exhibits all his errors, set off with the

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Rousseau.

the most animated display of eloquence, and in the most insidious manner. In this letter he describes himself as "more vehement than celebrated in his researches, but sincere on the whole, even against himself; simple and good, but sensible and weak; often doing evil, and always loving good; united by friendship, never by circumstances, and keeping more to his opinions than to his interests; requiring nothing of men, and not wishing to be under any obligation to them; yielding no more to their prejudices than to their will, and preserving his own as free as his reason; disputing about religion without licentiousness; loving neither impiety nor fanaticism, but disliking precise people more than bold spirits," &c. &c. From this specimen, the limitations he would appoint to this portrait may easily be discovered.

The letters of La Montaigne appeared soon after; but this work, far less eloquent, and full of envious discussions on the magistrates and clergy of Geneva, irritated the Protestant ministers without effecting a reconciliation with the clergy of the Romish church. Rousseau had solemnly abjured the latter religion in 1753, and, what is somewhat strange, had then resolved to live in France, a Catholic country. The Protestant clergy were not fully reconciled by this change; and the protection of the king of Prussia, to whom the principality of Neuchâtel belonged, was not sufficient to rescue him from that obloquy which the minister of Moutiers-Travers, the village to which he had retired, had excited against him. He preached against Rousseau, and his sermons produced an uproar among the people. On the night between the 6th and 7th September 1765, some fanatics, drove on by wine and the declamations of their minister, threw some stones at the windows of the Genevan philosopher, who fearing new insults, in vain sought an asylum in the canton of Berne. As this Canton was connected with the republic of Geneva, they did not think proper to allow him to remain in their city, being proscribed by that republic. Neither his broken state of health, nor the approach of winter, could soften the hearts of these obdurate Spartans. In vain, to prevent them from the fear they had of the spreading of his opinions, did he beseech them to shut him up in prison till the spring; for even this favour was denied him. Obligated to set out on a journey, in the beginning of a very inclement season, he reached Strasbourg in a very destitute situation. He received from Marshal de Contades, who then commanded in that place, every accommodation which could be expected from generosity, humanity, and compassion. He waited there till the weather was milder, when he went to Paris, where Mr Hume then was, who determined on taking him with him to England. After having made some stay in Paris, Rousseau actually set out for London in 1766. Hume, much affected with his situation and his misfortunes, procured for him a very agreeable settlement in the country. Our Genevan philosopher was not, however, long satisfied with this new place. He did not make such an impression on the minds of the English as he had done on the French. His free disposition, his obdurate and melancholy temper, was deemed no singularity in England. He was there looked upon as an ordinary man, and the periodical prints were filled with satires against him. In particular, they published a forged letter from the king

of Prussia, holding up to ridicule the principles and conduct of this new Diogenes. Rousseau imagined there was a plot between Hume and some philosophers in France to destroy his glory and repose. He sent a letter to him, filled with the most abusive expressions, and reproaching him for his conduct towards him. From this time he looked upon Hume as a wicked and perfidious person, who had brought him to England with no other view than to expose him to public ridicule; which foolish and chimerical idea was nourished by self-love and a restless disposition. He imagined that the English philosopher, amidst all his kindnesses, had something disagreeable in the manner of expressing them. The bad health of Rousseau, a strong and melancholy imagination, a too nice sensibility, a jealous disposition, joined with philosophic vanity, cherished by the false informations of his governess, who possessed an uncommon power over him; all these taken together, might tend to prepossess him with unfavourable sentiments of some innocent freedoms his benefactor might have taken with him, and might render him ungrateful, which he thought himself incapable of becoming. Meanwhile, these false conjectures and probabilities ought never to have had the weight with an honest mind to withdraw itself from its friend and benefactor. Proofs are always necessary in cases of this kind; and that which Rousseau had was by no means a certain demonstration. The Genevan philosopher, however, certainly returned to France. In passing through Amiens, he met with M. Gresset, who interrogated him about his misfortunes and the controversies he had been engaged in. He only answered, "You have got the art of making a parrot speak; but you are not yet possessed of the secret of making a bear speak." In the mean time, the magistrates of this city wished to confer on him some mark of their esteem, which he absolutely refused. His disordered imagination viewed these flattering civilities as nothing else than insults, such as were lavished on Sancho in the island of Barataria. He thought one part of the people looked upon him as like Lazarille of Tormes, who, being fixed to the bottom of a tub, with only his head out of the water, was carried from one town to another to amuse the vulgar. But these wrong and whimsical ideas did not prevent him from aspiring after a residence in Paris, where, without doubt, he was more looked on as a spectacle than in any other place whatever. On the 1st July 1770, Rousseau appeared, for the first time, at the regency coffee-house, dressed in ordinary clothing, having for some time previous to this wore an Armenian habit. He was loaded with praises by the surrounding multitude. "It is somewhat singular (says M. Sennebier) to see a man so haughty as he returning to the very place from whence he had been banished so often. Nor is it one of the smallest inconsistencies of this extraordinary character, that he preferred a retreat in that place of which he had spoken so much ill." It is as singular that a person under sentence of imprisonment should wish to live in so public a manner in the very place where his sentence was in force against him. His friends procured for him, however, liberty of staying, on condition that he should neither write on religion nor politics: he kept his word; for he wrote none at all. He was contented with living in a calm philosophical manner, giving himself to the society of a few tried friends, shunning the

Rousseau.

Rousseau. company of the great, appearing to have given up all his whimsies, and affecting neither the character of a philosopher nor a *bel esprit*. He died of an apoplexy at Ermenonville, belonging to the marquis de Girardin, about ten leagues from Paris, July 2. 1778, aged 66 years. This nobleman has erected to his memory a very plain monument, in a grove of poplars, which constitutes part of his beautiful gardens. On the tomb are inscribed the following epitaphs:

*Ici repose
 L'Homme de la Nature
 Et de la Verite!*

Vitam impendere Vero.*

* His motto.

Hic jacent Ossâ J. J. Rousseau.

The curious who go to see this tomb likewise see the cloak which the Genevan philosopher wore. Above the door is inscribed the following sentence, which might afford matter for a whole book: "He is truly free, who, to accomplish his pleasure, has no need of the assistance of a second person." Rousseau, during his stay in the environs of Lyons, married Mademoiselle le Vasseur, his governess, a woman who, without either beauty or talents, had gained over him a great ascendancy. She waited on him in health and in sickness: But as if she had been jealous of possessing him alone, she drove from his mind, by the most perfidious insinuations, all those who came to entertain him; and when Rousseau did not dismiss them, she prevented their return by invariably refusing them admittance. By these means she the more easily led her husband into inconsistencies of conduct, which the originality of his character as well as of his opinions so much contributed to assist. Nature had perhaps but given him the embryo of his character, and art had probably united to make it more singular. He did not incline to associate with any person; and as this method of thinking and living was uncommon, it procured him a name, and he displayed a kind of fantasticalness in his behaviour and his writings. Like Diogenes of old, he united simplicity of manners with all the pride of genius; and a large stock of indolence, with an extreme sensibility, served to render his character still more uncommon. "An indolent mind (says he), terrified at every application, a warm, bilious, and irritable temperament, sensible also in a high degree to every thing that can affect it, appear not possible to be united in the same person: and yet these two contrarieties compose the chief of mine. An active life has no charms for me. I would an hundred times rather consent to be idle than to do any thing against my will; and I have an hundred times thought that I would live not amiss in the Bastille, provided I had nothing to do but just continue there. In my younger days I made several attempts to get in there; but as they were only with the view of procuring a refuge and rest in my old age, and, like the exertions of an indolent person, only by fits and starts, they were never attended with the smallest success. When misfortunes came, they afforded me a pretext of giving myself up to my ruling passion." He often exaggerated his misfortunes to himself as well as to others. He endeavoured particularly to render interesting by his description his misfortunes and his poverty, although the former were far less than he imagined, and notwith-

standing he had certain resources against the latter. In other respects he was charitable, generous, sober, just, contenting himself with what was purely necessary, and refusing the means which might have procured him wealth and offices. He cannot, like many other sophists, be accused of having often repeated with a studied emphasis the word *Virtue*, without inspiring the sentiment. When he is speaking of the duties of mankind, of the principles necessary to our happiness, of the duty we owe to ourselves and to our equals, it is with a copiousness, a charm, and an impetuosity, that could only proceed from the heart. He said one day to M. de Buffon, "You have asserted and proved before J. J. Rousseau that mothers ought to suckle their children." "Yes (says this great naturalist), we have all said so; but M. Rousseau alone forbids it, and causes himself to be obeyed." Another academician said, "that the virtues of Voltaire were without heart, and those of Rousseau without head." He was acquainted at an early age with the works of the Greek and Roman authors; and the republican virtues there held forth to view, the rigorous austerity of Cato, Brutus, &c. carried him beyond the limits of a simple estimation of them. Influenced by his imagination, he admired every thing in the ancients, and saw nothing in his contemporaries but enervated minds and degenerated bodies.

His ideas about politics were almost as eccentric as his paradoxes about religion. Some reckon his *Social Compact*, which Voltaire calls the *Unsocial Compact*, the greatest effort his genius produced. Others find it full of contradictions, errors, and cynical passages, obscure, ill-arranged, and by no means worthy of his shining pen. There are several other small pieces wrote by him, to be found in a collection of his works published in 25 vols 8vo and 12mo, to which there is appended a very insignificant supplement in 6 vols.

The most useful and most important truths in this collection are picked out in his *Thoughts*; in which the confident sophist and the impious author disappear, and nothing is offered to the reader but the eloquent writer and the contemplative moralist. There were found in his port-folio his *Confessions*, in twelve books; the first six of which were published. "In the preface to these memoirs, which abound with characters well drawn, and written with warmth, with energy, and sometimes with elegance, he declares (says M. Palissot), like a peevish misanthrope, who boldly introduces himself on the ruins of the world, to declare to mankind, whom he supposes assembled upon these ruins, that in that innumerable multitude, none could dare to say, *I am better than that man*. This affectation of seeing himself alone in the universe, and of continually directing every thing to himself, may appear to some morose minds a fanaticism of pride, of which we have no examples, at least since the time of Cardan." But this is not the only blame which may be attached to the author of the *Confessions*. With uneasiness we see him, under the pretext of sincerity, dishonouring the character of his benefactress Lady Warren. There are innuendos no less offensive against obscure and celebrated characters, which ought entirely or partly to have been suppressed. A lady of wit said, that Rousseau would have been held in higher estimation for virtue, "had he died without his confession." The same opinion is entertained by M. Senne-

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bier, author of the Literary History of Geneva: "His confessions (says he) appear to me to be a very dangerous book, and paint Rousseau in such colours as we would never have ventured to apply to him. The excellent analyses which we meet with of some sentiments, and the delicate anatomy which he makes of some actions, are not sufficient to counterbalance the detestable matter which is found in them, and the unceasing obloquies everywhere to be met with." It is certain, that if Rousseau has given a faithful delineation of some persons, he has viewed others through a cloud, which formed in his mind perpetual suspicions. He imagined he thought justly and spoke truly; but the simplest thing in nature, says M. Servant, if distilled through his violent and suspicious head, might become poison. Rousseau, in what he says of himself, makes such acknowledgments as certainly prove that there were better men than he, at least if we may judge him from the first six books of his memoirs, where nothing appears but his vices. They ought not perhaps to be separated from the six last books, where he speaks of the virtues which make reparation for them; or rather the work ought not to have been published at all, if it be true (which there can be little doubt of) that in his confessions he injured the public manners, both by the baseness of the vices he disclosed, and by the manner in which he united them with the virtues. The other pieces which we find in this new edition of his works are, 1. *The Reveries of a Solitary Wanderer*, being a journal of the latter part of his life. In this he confesses, that he liked better to send his children into hospitals destined for orphans, than to take upon himself the charge of their maintenance and education; and endeavours to palliate this error, which nothing can exculpate. 2. *Considerations upon the Government of Poland*. 3. *The Adventures of Lord Edward*, a novel, being a kind of supplement to the new *Heloisa*. 4. *Various Memoirs and Fugitive Pieces*, with a great number of letters, some of which are very long, and written with too much study, but containing some eloquent passages and some deep thought. 5. *Emilia and Sophia*. 6. *The Levite of Ephraim*, a poem in prose, in 4 cantos; written in a truly ancient style of simplicity. 7. *Letters to Sara*. 8. *An Opera and a Comedy*. 9. *Translations of the first book of Tacitus's History, of the Episode of Olinda and Sophronia, taken from Tasso*, &c. &c. Like all the other writings of Rousseau, we find in these posthumous pieces many admirable and some useful things; but they also abound with contradictions, paradoxes, and ideas very unfavourable to religion. In his letters especially we see a man chagrined at misfortunes, which he never attributes to himself, suspicious of every body about him, calling and believing himself a lamb in the midst of wolves; in one word, as like Pascal in the strength of his genius, as in his fancy of always seeing a precipice about him. This is the reflection of M. Servant, who knew him, assisted him, and caressed him during his retreat at Grenoble in 1768. This magistrate having been very attentive in observing his character, ought the rather to be believed, as he inspected it without either malice, envy, or resentment, and only from the concern he had for this philosopher, whom he loved and admired.

ROUT, in law, is applied to an assembly of persons

going forcibly to commit some unlawful act, whether they execute it or not. See RIOT.

ROUTE, a public road, highway, or course, especially that which military forces take. This word is also used for the defeat and flight of an army.

ROWE (Nicholas), descended of an ancient family in Devonshire, was born in 1673. He acquired a complete taste of the classic authors under the famous Dr Busby in Westminster school; but poetry was his early and darling study. His father, who was a lawyer, and designed him for his own profession, entered him a student in the Middle Temple. He made remarkable advances in the study of the law; but the love of the belles lettres, and of poetry in particular, stopt him in his career. His first tragedy, the *Ambitious Stepmother*, meeting with universal applause, he laid aside all thoughts of rising by the law. He afterward composed several tragedies; but that which he valued himself most upon, was his *Tamerlane*. The others are, the *Fair Penitent*, *Ulysses*, the *Royal Convert*, *Jane Shore*, and *Lady Jane Grey*. He also wrote a poem called the *Biter*, and several poems upon different subjects, which have been published under the title of *Miscellaneous Works*, in one volume, as his dramatic works have been in two. Rowe is chiefly to be considered (Dr Johnson observes) in the light of a tragic writer and a translator. In his attempt at comedy, he failed so ignominiously, that his *Biter* is not inserted in his works; and his occasional poems and short compositions are rarely worthy of either praise or censure, for they seem the casual sports of a mind seeking rather to amuse its leisure than to exercise its powers. In the construction of his dramas there is not much art; he is not a nice observer of the unities. He extends time, and varies place, as his convenience requires. To vary the place is not (in the opinion of the learned critic from whom these observations are borrowed) any violation of nature, if the change be made between the acts; for it is no less easy for the spectator to suppose himself at Athens in the second act, than at Thebes in the first; but to change the scene, as is done by Rowe in the middle of an act, is to add more acts to the play, since an act is so much of the business as is transacted without interruption. Rowe, by this licence, easily extricates himself from difficulties; as in *Lady Jane Grey*, when we have been terrified with all the dreadful pomp of public execution, and are wondering how the heroine or the poet will proceed, no sooner has Jane pronounced some prophetic rhymes, than—pass and be gone—the scene closes, and Pembroke and Gardiner are turned out upon the stage. I know not (says Dr Johnson) that there can be found in his plays any deep search into nature, any accurate discriminations of kindred qualities, or nice display of passion in its progress; all is general and undefined. Nor does he much interest or affect the auditor, except in *Jane Shore*, who is always seen and heard with pity. *Alicia* is a character of empty noise, with no resemblance to real sorrow or to natural madness. Whence then has Rowe his reputation? From the reasonableness and propriety of some of his scenes, from the elegance of his diction, and the suavity of his verse. He seldom moves either pity or terror, but he often elevates the sentiment; he seldom pierces the breast, but he always delights the ear, and often improves the under-

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Rowe. understanding. Being a great admirer of Shakespeare, he gave the public an edition of his plays; to which he prefixed an account of that great man's life. But the most considerable of Mr Rowe's performances was a translation of Lucan's *Pharsalia*, which he just lived to finish, but not to publish; for it did not appear in print till 1728, ten years after his death.

Meanwhile, the love of poetry and books did not make him unfit for business; for nobody applied closer to it when occasion required. The Duke of Queensberry, when secretary of state, made him secretary for public affairs. After the Duke's death, all avenues were stopped to his preferment; and during the rest of Queen Anne's reign he passed his time with the Muses and his books. A story, indeed, is told of him, which shows that he had some acquaintance with her ministers. It is said, that he went one day to pay his court to the lord-treasurer Oxford, who asked him, "If he understood Spanish well?" He answered, "No:" but thinking that his Lordship might intend to send him into Spain on some honourable commission, he presently added, "that he did not doubt but he could shortly be able both to understand and to speak it." The earl approving what he said, Rowe took his leave; and, retiring a few weeks to learn the language, waited again on the Earl to acquaint him with it. His Lordship asking him, "If he was sure he understood it thoroughly?" and Rowe affirming that he did, "How happy are you, Mr Rowe," said the Earl, "that you can have the pleasure of reading and understanding the History of Don Quixote in the original!" On the accession of George I. he was made poet laureat, and one of the land surveyors of the customs in the port of London. The prince of Wales conferred on him the clerkship of his council; and the Lord Chancellor Parker made him his secretary for the presentations. He did not enjoy these promotions long; for he died Dec. 6. 1718, in his 45th year.

Mr Rowe was twice married; had a son by his first wife, and a daughter by his second. He was a handsome, genteel man; and his mind was as amiable as his person. He lived beloved; and at his death had the honour to be lamented by Mr Pope, in an epitaph which is printed in Pope's works, although it was not affixed on Mr Rowe's monument in Westminster-abbey, where he was interred in the poet's corner, opposite to Chaucer.

Rowe (Elisabeth), an English lady, eminent for her excellent writings both in prose and verse, born at Ilchester in Somersetshire in 1647, was the daughter of worthy parents, Mr Walter Singer and Mrs Elisabeth Portnel. She received the first serious impressions of religion as soon as she was capable of it. There being a great affinity between painting and poetry, this lady, who had a vein for the one, naturally had a taste for the other. She was also very fond of music; chiefly of the grave and solemn kind, as best suited to the grandeur of her sentiments and the sublimity of her devotion. But poetry was her favourite employment, her distinguishing excellence. So prevalent was her genius this way, that her prose is all poetical. In 1696, a collection of her poems was published at the desire of two friends. Her paraphrase on the xxxviiiith chapter of Job was written at the request of bishop Ken. She had no other tutor for the French and Italian languages

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than the honourable Mr Thynne, who willingly took the task upon himself. Her shining merit, with the charms of her person and conversation, had procured her a great many admirers. Among others, it is said, the famous Mr Prior made his addressee to her. But Mr Thomas Rowe was to be the happy man. This gentleman was honourably descended: and his superior genius, and insatiable thirst after knowledge, were conspicuous in his earliest years. He had formed a design to compile the lives of all the illustrious persons in antiquity omitted by Plutarch; which, indeed, he partly executed. Eight lives were published since his decease. They were translated into French by the abbé Bellen-ger in 1734. He spoke with ease and fluency; had a frank and benevolent temper, an inexhaustible fund of wit, and a communicative disposition. Such was the man who, charmed with the person, character, and writings, of our authoress, married her in 1710, and made it his study to repay the felicity with which she crowned his life. Too intense an application to study, beyond what the delicacy of his frame would bear, broke his health, and threw him into a consumption, which put a period to his valuable life in May 1715, when he was but just past the 28th year of his age. Mrs Rowe wrote a beautiful elegy on his death; and continued to the last moments of her life to express the highest veneration and affection for his memory. As soon after his decease as her affairs would permit, she indulged her inclination for solitude, by retiring to Frome, in Somersetshire, in the neighbourhood of which place the greatest part of her estate lay. In this recess it was that she composed the most celebrated of her works, *Friendship in Death*, and the *Letters Moral and Entertaining*. In 1736, she published, the *History of Joseph*; a poem which she had written in her younger years. She did not long survive this publication; for she died of an apoplexy, as was supposed, Feb. 20. 1736-7. In her cabinet were found letters to several of her friends, which she had ordered to be delivered immediately after her decease. The Rev. Dr Isaac Watts, agreeably to her request, revised and published her devotions in 1737, under the title of *Devout Exercises of the Heart in Meditation and Soliloquy, Praise and Prayer*; and, in 1739, her *Miscellaneous Works*, in prose and verse, were published in 2 vols 8vo, with an account of her life and writings prefixed.

As to her person, she was not a regular beauty, yet possessed a large share of the charms of her sex. She was of a moderate stature, her hair of a fine colour, her eyes of a darkish grey inclining to blue, and full of fire. Her complexion was very fair, and a natural blush glowed in her cheeks. She spoke gracefully; her voice was exceedingly sweet and harmonious; and she had a softness in her aspect which inspired love, yet not without some mixture of that awe and veneration which distinguished sense and virtue, apparent in the countenance, are wont to create.

ROWEL, among farriers, a kind of issue answering to what in surgery is called a *seton*. See FARRIERY, sect. v.

ROWLEY, a monk who is said to have flourished at Bristol in the 15th century, and to have been an author voluminous and elegant. Of the poems attributed to him, and published some time ago, various

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Rowley, opinions have been entertained, which we have noticed elsewhere. They seem now to be almost forgotten. See CHATTERTON.

ROWLEY (William), who stands in the third class of dramatic writers, lived in the reign of king Charles I. and received his education at the university of Cambridge; but whether he took any degree there, is not evident; there being but few particulars preserved in regard to him more than his close intimacy and connection with all the principal wits and poetical geniuses of that age, by whom he was well beloved, and with some of whom he joined in their writings. Wood styles him "the ornament, for wit and ingenuity, of Pembroke-hall in Cambridge." In a word, he was a very great benefactor to the English stage, having, exclusive of his aid lent to Middleton, Day, Heywood, Webster, &c. left us five plays of his own composing, and one in which even the immortal Shakespeare afforded him some assistance.

ROXBURGH-SHIRE, or TEVIOTDALE, a county of Scotland, deriving its name from the town of Roxburgh, which is now destroyed, and the river Teviot, that runs through the shire into the Tweed, is divided into the three districts of *Teviotdale*, *Liddisdale*, and *Eskdale*, or *Eusdale*, so called from their respective rivers, Teviot, Liddal, and Esk. It is bounded on the east and south-east by Northumberland and Cumberland, on the south and south-west by Annandale, on the west by Tweeddale, on the north by the Merse and Lauderdale; extending about 30 miles from east to west, and about 15 in breadth from the border of England to the Blue Cairn in Lauder-moor. The shire exhibits a rough irregular appearance of hills, moor, and mountains, interspersed, however, with narrow valleys, and watered with delightful streams. Though the face of the country is bare of woods, the valleys yield plenty of corn, and the hills abound with pasture for sheep and black cattle. The principal mountains of this country are known by the name of *Cockraw*: from whence a range of very high hills runs westward, dividing Scotland from England. On the confines of this shire are the debateable lands; the property of which was formerly disputed by the Scots and English borderers, but adjudged to the Scots at the union of the crowns.—Roxburghshire yields plenty of lime and freestone, which in former times was freely used by the inhabitants in building castles to defend them from the invasions of their English neighbours. The most distinguished families in this county are the Scots and Kers, who raised themselves to wealth and honours by their bravery and success in a sort of predatory war with their enemies of South Britain. The shire is very populous; and the people are stout and valiant. They were formerly inured to military discipline and all the dangers of war, by living on dry marches contiguous to those of England; being so numerous and alert, that this and the neighbouring shire of Berwick could in 24 hours produce 10,000 men on horseback, well armed and accoutred. In the shire of Roxburgh we still meet with a great number of old castles and seats belonging to private gentlemen, whose ancestors signalized themselves in this manner; and we find the remains of old encampments, and a Roman military way, vulgarly called the *caufeway*, running from Haunum to the Tweed. The principal town, called *Roxburgh*, giving the title of

duke to the chief of the Kers, was anciently a royal borough, containing divers parishes, large and flourishing, defended by a strong citadel, which was often alternately reduced by the English and Scotch adventurers. It was in besieging this castle that James II. of Scotland lost his life by the bursting of a cannon. In consequence of the almost continual wars between the two nations, this fortress was razed, the town ruined, and its royalty translated to Jedburgh, which is now a royal borough, situated between the Tefy and Jed.

ROXENT-CAPE, or *Rock of Lisbon*, a mountain and remarkable promontory in Portugal, situated in the Atlantic ocean, at the north entrance of the Tagus, 22 miles north of Lisbon.

ROYAL, something belonging to a king: thus we say, royal family, royal assent, royal exchange, &c.

Royal Family. The first and most considerable branch of the king's royal family, regarded by the laws of England, is the queen.

1. The queen of England is either queen *regent*, queen *consort*, or queen *dowager*. The queen *regent*, *regnant*, or *sovereign*, is she who holds the crown in her own right; as the first (and perhaps the second) queen Mary, queen Elizabeth, and queen Anne; and such a one has the same powers, prerogatives, rights, dignities, and duties, as if she had been a king. This is expressly declared by statute 1 Mar. I. st. 3. c. 1. But the queen *consort* is the wife of the reigning king; and she by virtue of her marriage is participant of divers prerogatives above other women.

And, first, she is a public person, exempt and distinct from the king; and not, like other married women, so closely connected as to have lost all legal or separate existence so long as the marriage continues. For the queen is of ability to purchase lands and to convey them, to make leases, to grant copyholds, and do other acts of ownership, without the concurrence of her lord; which no other married woman can do: a privilege as old as the Saxon era. She is also capable of taking a grant from the king, which no other wife is from her husband; and in this particular she agrees with the *augusta* or *piissima regina conjux divi imperatoris* of the Roman laws; who, according to Justinian, was equally capable of making a grant to, and receiving one from, the emperor. The queen of England hath separate courts and officers distinct from the king's, not only in matters of ceremony, but even of law; and her attorney and solicitor general are entitled to a place within the bar of his majesty's courts, together with the king's counsel. She may likewise sue and be sued alone, without joining her husband. She may also have a separate property in goods as well as lands, and has a right to dispose of them by will. In short, she is in all legal proceedings looked upon as a feme sole, and not as a feme covert; as a single, not as a married woman. For which the reason given by Sir Edward Coke is this: because the wisdom of the common law would not have the king (whose continual care and study is for the public, and *circa ardua regni*) to be troubled and disquieted on account of his wife's domestic affairs; and therefore it vests in the queen a power of transacting her own concerns, without the intervention of the king, as if she was an unmarried woman.

The queen hath also many exemptions, and minute prerogatives. For instance: she pays no toll; nor is she

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Royal.

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she liable to any amercement in any court. But in general, unless where the law has expressly declared her exempted, she is upon the same footing with other subjects; being to all intents and purposes the king's subject, and not his equal: in like manner as in the imperial law, *Augustus legibus solutus non est*.

The queen hath also some pecuniary advantages, which form her a distinct revenue: as, in the first place, she is intitled to an ancient perquisite called *queen-gold*, or *aurum reginæ*; which is a royal revenue belonging to every queen-consort during her marriage with the king, and due from every person who hath made a voluntary offering or fine to the king, amounting to 10 merks or upwards, for and in consideration of any privileges, grants, licences, pardons, or other matter of royal favour conferred upon him by the king: and it is due in the proportion to one-tenth part more, over and above the entire offering or fine made to the king, and becomes an actual debt of record to the queen's majesty by the mere recording of the fine. As, if 100 merks of silver be given to the king for liberty to take in mortmain, or to have a fair, market, park, chase, or free-warren; there the queen is intitled to 10 merks in silver, or (what was formerly an equivalent denomination) to one merk in gold, by the name of *queen-gold*, or *aurum reginæ*. But no such payment is due for any aids or subsidies granted to the king in parliament or convocation; or for fines imposed by courts on offenders against their will; nor for voluntary presents to the king, without any consideration moving from him to the subject; nor for any sale or contract whereby the present revenues or possessions of the crown are granted away or diminished.

The original revenue of our ancient queens, before and soon after the conquest, seems to have consisted in certain reservations or rents out of the demesne lands of the crown, which were expressly appropriated to her majesty, distinct from the king. It is frequent in domesday book, after specifying the rent due to the crown, to add likewise the quantity of gold or other renders reserved to the queen. These were frequently appropriated to particular purposes; to buy wood for her majesty's use, to purchase oil for lamps, or to furnish her attire from head to foot, which was frequently very costly, as one single robe in the fifth year of Henry II. stood the city of London in upwards of 80 pounds: A practice somewhat similar to that of the eastern countries, where whole cities and provinces were specifically assigned to purchase particular parts of the queen's apparel. And for a farther addition to her income, this duty of queen-gold is supposed to have been originally granted; those matters of grace and favour, out of which it arose, being frequently obtained from the crown by the powerful intercession of the queen. There are traces of its payment, though obscure ones, in the book of domesday, and in the great pipe-roll of Henry I. In the reign of Henry II. the manner of collecting it appears to have been well understood; and it forms a distinct head in the ancient dialogue of the exchequer written in the time of that prince, and usually attributed to Gervase of Tilbury. From that time downwards, it was regularly claimed and enjoyed by all the queen-consorts of England till the death of Henry VIII.; though after the accession of the Tudor family, the collecting of it seems to have

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been much neglected: and there being no queen consort afterwards till the accession of James I. a period of near 60 years, its very nature and quantity then became a matter of doubt; and being referred by the king to the chief justices and chief baron, their report of it was so very unfavourable, that his consort queen Anne, though she claimed it, yet never thought proper to exact it. In 1635, 11 Car. I. a time fertile of expedients for raising money upon dormant precedents in our old records (of which ship-money was a fatal instance), the king, at the petition of his queen Henrietta Maria, issued out his writ for levying it; but afterwards purchased it of his consort at the price of 10,000 pounds; finding it, perhaps, too trifling and troublesome to levy. And when afterwards, at the Restoration, by the abolition of military tenures, and the fines that were consequent upon them, the little that legally remained of this revenue was reduced to almost nothing at all; in vain did Mr Prynne, by a treatise that does honour to his abilities as a painful and judicious antiquarian, endeavour to excite queen Catherine to revive this antiquated claim.

Another ancient perquisite belonging to the queen consort, mentioned by all our old writers, and therefore only worthy notice, is this: that on the taking a whale on the coasts, which is a royal fish, it shall be divided between the king and queen; the head only being the king's property, and the tail of it the queen's. *De stirgione observetur, quod rex illum habebit integrum: de balena vero sufficit, si rex habeat caput, et regina caudam*. The reason of this whimsical division, as assigned by our ancient records, was, to furnish the queen's wardrobe with whale-bone.

But farther: though the queen is in all respects a subject, yet, in point of the security of her life and person, she is put upon the same footing with the king. It is equally treason (by the statute 25 Edward III.) to imagine or compass the death of our lady the king's companion, as of the king himself; and to violate or defile the queen consort, amounts to the same high crime; as well in the person committing the fact, as in the queen herself if consenting. A law of Henry VIII. made it treason also for any woman who was not a virgin, to marry the king without informing him thereof: but this law was soon after repealed; it trespassing too strongly, as well on natural justice as female modesty. If however the queen be accused of any species of treason, she shall (whether consort or dowager) be tried by the peers of parliament, as queen Ann Boleyn was in 28 Hen. VIII.

The husband of a queen regnant, as prince George of Denmark was to queen Anne, is her subject; and may be guilty of high treason against her: but, in the instance of conjugal fidelity, he is not subjected to the same penal restrictions. For which the reason seems to be, that if a queen consort is unfaithful to the royal bed, this may debase or bastardize the heirs to the crown; but no such danger can be consequent on the infidelity of the husband to a queen regnant.

2. A queen *dowager* is the widow of the king, and as such enjoys most of the privileges belonging to her as queen consort. But it is not high treason to conspire her death, or to violate her chastity; for the same reason as was before alleged, because the succession to the crown is not thereby endangered. Yet still, *pro*

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dignitate regali, no man can marry a queen-dowager without special licence from the king, on pain of forfeiting his lands and goods. This Sir Edward Coke tells us, was enacted in parliament in 6 Henry VI. though the statute be not in print. But she, though an alien born, shall still be entitled to dower after the king's demise, which no other alien is. A queen-dowager when married again to a subject, doth not lose her regal dignity, as peeresses-dowager do when they marry commoners. For Katharine, queen dowager of Henry V. though she married a private gentleman, Owen ap Meredith ap Theodore, commonly called *Owen Tudor*; yet, by the name of *Katharine queen of England*, maintained an action against the bishop of Carlisle. And so the dowager of Navarre marrying with Edmond the brother of king Edward I. maintained an action of dower by the name of *queen of Navarre*.

3. The prince of Wales, or heir apparent to the crown, and also his royal consort, and the princess royal, or eldest daughter of the king, are likewise peculiarly regarded by the laws. For, by statute 25 Edw. III. to compass or conspire the death of the former, or to violate the chastity of either of the latter, are as much high treason as to conspire the death of the king, or violate the chastity of the queen. And this upon the same reason as was before given; because the prince of Wales is next in succession to the crown, and to violate his wife might taint the blood-royal with bastardy; and the eldest daughter of the king is also alone inheritable to the crown on failure of issue male, and therefore more respected by the laws than any of her younger sisters; insomuch that upon this, united with other (feodal) principles, while our military tenures were in force, the king might levy an aid for marrying his eldest daughter, and her only. The heir apparent to the crown is usually made prince of Wales and earl of Chester, by special creation and investiture; but being the king's eldest son, he is by inheritance duke of Cornwall, without any new creation.

4. The rest of the royal family may be considered in two different lights, according to the different senses in which the term *royal family* is used. The larger sense includes all those who are by any possibility inheritable to the crown. Such, before the revolution, were all the descendants of William the Conqueror; who had branched into an amazing extent by intermarriages with the ancient nobility. Since the revolution and act of settlement, it means the Protestant issue of the princess Sophia; now comparatively few in number, but which in process of time may possibly be as largely diffused. The more confined sense includes only those who are in a certain degree of propinquity to the reigning prince, and to whom therefore the law pays an extraordinary regard and respect; but after that degree is past, they fall into the rank of ordinary subjects, and are seldom considered any farther, unless called to the succession upon failure of the nearer lines. For though collateral consanguinity is regarded indefinitely with respect to inheritance or succession, yet it is and can only be regarded within some certain limits in any other respect, by the natural constitution of things and the dictates of positive law.

The younger sons and daughters of the king, and

other branches of the royal family, who are not in the immediate line of succession, were therefore little farther regarded by the ancient law, than to give them a certain degree of precedence before all peers and public officers as well ecclesiastical as temporal. This is done by the statute 31 Henry VIII. c. 10. which enacts, that no person except the king's children shall presume to sit or have place at the side of the cloth of estate in the parliament chamber; and that certain great officers therein named shall have precedence above all dukes, except only such as shall happen to be the king's son, brother, uncle, nephew (which Sir Edward Coke explains to signify grandson or *nepos*), or brother's or sister's son. But under the description of the king's *children*, his *grandsons* are held to be included, without having recourse to Sir Edward Coke's interpretation of *nephew*; and therefore when his late majesty king George II. created his grandson Edward, the second son of Frederick prince of Wales deceased, duke of York, and referred it to the house of lords to settle his place and precedence, they certified that he ought to have precedence next to the late duke of Cumberland, the then king's youngest son; and that he might have a seat on the left hand of the cloth of estate. But when, on the accession of his present majesty, these royal personages ceased to take place as the *children*, and ranked only as the *brother* and *uncle* of the king, they also left their seats on the side of the cloth of estate; so that when the duke of Gloucester, his majesty's second brother, took his seat in the house of peers, he was placed on the upper end of the earls bench (on which the dukes usually sit) next to his royal highness the duke of York. And in 1717, upon a question referred to all the judges by king George I. it was resolved, by the opinion of ten against the other two, that the education and care of all the king's grandchildren, while minors, did belong of right to his majesty as king of this realm, even during their father's life. But they all agreed, that the care and approbation of their marriages, when grown up, belonged to the king their grandfather. And the judges have more recently concurred in opinion, that this care and approbation extend also to the presumptive heir of the crown; though to what other branches of the royal family the same did extend, they did not find precisely determined. The most frequent instances of the crown's interposition go no farther than nephews and nieces; but examples are not wanting of its reaching to more distant collaterals. And the statute 6 Henry VI. before mentioned, which prohibits the marriage of a queen-dowager without the consent of the king, assigns this reason for it: "because the disparagement of the queen shall give greater comfort and example to other ladies of estate, who are of the blood-royal, more lightly to disparage themselves." Therefore by the statute 28 Hen. VIII. c. 18. (repealed, among other statutes of treasons, by 1 Edw. VI. c. 12.) it was made high treason for any man to contract marriage with the king's children or reputed children, his sisters or aunts *ex parte paterna*, or the children of his brethren or sisters; being exactly the same degrees to which precedence is allowed by the statute 31 Hen. VIII. before-mentioned. And now, by statute 12 Geo. III. c. 11. no descendant of the body of king George II. (other than the issue of princesses married into foreign families) is capable of contracting

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tracting matrimony, without the previous consent of the king signified under the great seal; and any marriage contracted without such a consent is void. Provided, that such of the said descendants as are not above 25, may after a twelvemonth's notice given to the king's privy council, contract and solemnize marriage without the consent of the crown; unless both houses of parliament shall, before the expiration of the said year, expressly declare their disapprobation of such intended marriage. And all persons solemnizing, assisting, or being present at any such prohibited marriage, shall incur the penalties of the statute of *præmunire*.

Royal Oak, a fair spreading tree at Boscobel, in the parish of Donnington in Staffordshire, the boughs whereof were once covered with ivy; in the thick of which king Charles II. sat in the day-time with colonel Careless, and in the night lodged in Boscobel house: so that they are mistaken who speak of it as an old hollow oak; it being then a gay flourishing tree, surrounded with many more. The poor remains thereof are now fenced in with a handsome wall, with this inscription in gold letters: *Felicissimam arborem quam in asylum potentissimi regis Caroli II. Deus op. max. per quam reges regnant, hic crescere voluit, &c.*

Royal Society. See SOCIETY.

ROYALTIES, the rights of the king, otherwise called the *king's prerogative*, and the *regalia*. See PREROGATIVE and REGALIA.

ROYENIA, in botany: A genus of the digynia order, belonging to the decandria class of plants; and in the natural method ranking under the 18th order, *Bicornes*. The calyx is urceolated; the corolla monopetalous, with the limb revolved; the capsule is unilocular and quadrivalved.

ROYSTON, a town of Hertfordshire in England, seated in E. Long. 0. 1. N. Lat. 52. 3. It is a large place, seated in a fertile vale full of inns, and the market is very considerable for corn. There was lately discovered, almost under the market-place, a subterraneous chapel of one Rosia, a Saxon Lady: it has several altars and images cut out of the chalky sides, and is in form of a sugar-loaf, having no entrance but at the top.

RUBBER (*India*). See CAOUTCHOUC.

RUBENS (Sir Peter Paul), the most eminent of the Flemish painters, was born in 1577; but whether at Antwerp or Cologne it is not easy to determine. His father, who was a counsellor in the senate of Antwerp, had been forced by the civil wars to seek refuge in Cologne, and during his residence there Rubens is commonly said to have been born.

The genius of Rubens, which began to unfold itself in his earliest years, was cultivated with peculiar care, and embellished with every branch of classical and polite literature.

He soon discovered a strong inclination for designing; and used to amuse himself with that employment in his leisure hours, while the rest of his time was devoted to other studies. His mother, perceiving the bias of her son, permitted him to attend the instructions of Tobias Verhaecht a painter of architecture and landscape. He next became the pupil of Adam Van Oort, but he soon found that the abilities of this master were insufficient to answer his elevated ideas. His surly temper too was

disgustful to Rubens, whose natural disposition was modest and amiable.

Anxious to find an artist whose genius and dispositions were congenial with his own, he became the disciple of Octavio Van Veen, generally known by the name of Otho Venius, a painter of singular merit, and who was not only skilled in the principles of his art, but also distinguished for learning and other accomplishments. Between the master and scholar a remarkable similarity appeared in temper and inclination; indeed, in the whole turn of their minds. It was this congeniality of sentiments which animated Rubens with that ardent passion for the art of painting which at length determined him to pursue it as a profession. From this time he gave up his whole mind to it; and so successful were his exertions, that he soon equalled his master.

In order to arrive at that perfection which he already beheld in idea, it became requisite to study the productions of the most eminent artists. For this purpose he travelled through Italy, visiting the most valuable collections of paintings and antique statues with which that country abounds.

Sandrart, who was intimately acquainted with Rubens, informs us, that he was recommended in the most honourable manner to the duke of Mantua by the archduke Albert, who had witnessed his talents in the finishing of some fine paintings designed for his own palace. At Mantua he was received by the duke with the most flattering marks of distinction, and had opportunities of improving himself which he did not neglect. Here he carefully studied the works of Julio Romano. He next visited Rome, where he had an opportunity of examining the productions of Raphael. The paintings of Titian and Paolo Veronese called him to Venice, where he accomplished himself in the art of colouring.

He continued in Italy seven years. At length receiving intelligence that his mother was taken ill, he hastened to Antwerp: but his filial affection was not gratified with a sight of her; she died before his arrival. He married soon after; but his wife dying at the end of four years, he retired from Antwerp for some time, and endeavoured to soothe his melancholy by a journey to Holland. At Utrecht he visited Hurtort, for whom he had a great value.

The fame of Rubens was now spread over Europe. He was invited by Mary of Medicis queen of Henry IV. of France to Paris, where he painted the galleries in the palace of Luxemburg. These form a series of paintings which delineate the history of Mary; and afford a convincing proof how well qualified he was to excel in allegorical and emblematical compositions. While at Paris he became acquainted with the duke of Buckingham, who was so taken with his great talents and accomplishments, that he judged him well qualified to explain to Isabella, the wife of Albert the archduke, the cause of the misunderstanding which had taken place between the courts of England and Spain. In this employment Rubens acquitted himself with such propriety, that Isabella appointed him envoy to the king of Spain, with a commission to propose terms of peace, and to bring back the instructions of that monarch. Philip was no less captivated with Rubens: He conferred on him the honour of knighthood, and made him secretary to his privy council. Rubens returned

Rubens.

Rubens.

returned to Brussels, and thence passed over into England in 1630 with a commission from the Catholic king to negotiate a peace between the two crowns. He was successful in his negotiation, and a treaty was concluded. Charles I. who then filled the British throne, could not receive Rubens in a public character on account of his profession; nevertheless, he treated him with every mark of respect. Having engaged him to paint some of the apartments of Whitehall, he not only gave him a handsome sum of money, but, as an acknowledgment of his merit, created him a knight; and the duke of Buckingham, his friend and patron, purchased of him a collection of pictures, statues, medals, and antiques, with the sum of L. 10,000.

He returned to Spain, where he was magnificently honoured and rewarded for his services. He was created a gentleman of the king's bedchamber, and named secretary to the council of state in the Netherlands. Rubens, however, did not lay aside his profession. He returned to Antwerp, where he married a second wife called *Helena Forment*, who, being an eminent beauty, helped him much in the figures of his women. He died on 30th May 1640, in the 63d year of his age; leaving vast riches to his children. Albert his eldest son succeeded him in the office of secretary of state in Flanders.

As Rubens was possessed of all the ornaments and advantages that render a man worthy to be esteemed or courted, he was always treated as a person of consequence. His figure was noble, his manners engaging, and his conversation lively; his learning was universal. Though his favourite study must have occupied him much, yet he found time to read the works of the most celebrated authors, and especially the poets. He spoke several languages perfectly, and was an excellent statesman.

His house at Antwerp was enriched with every thing in the arts that was rare and valuable. It contained one spacious apartment, in imitation of the rotunda at Rome, adorned with a choice collection of pictures which he had purchased in Italy; part of which he sold to the duke of Buckingham.

His genius qualified him to excel equally in every thing that can enter into the composition of a picture. His invention was so fertile, that, if he had occasion to paint the same subject several times, his imagination always supplied him with something striking and new. The attitudes of his figures are natural and varied, the carriage of the head is peculiarly graceful, and his expression noble and animated.

He is by all allowed to have carried the art of colouring to its highest pitch; he understood so thoroughly the true principles of the chiaro-scuro, that he gave to his figures the utmost harmony, and a prominence resembling real life. His pencil is mellowed, his strokes bold and easy, his carnation glows with life, and his drapery is simple, but grand, broad, and hung with much skill.

The great excellence of Rubens appears in his grand compositions; for as they are to be viewed at a distance, he laid on a proper body of colours with uncommon boldness, and fixed all his tints in their proper places; so that he never impaired their lustre by breaking or torturing them; but touched them in such a manner as to give them a lasting force, beauty, and harmony.

It is generally allowed, that Rubens wanted correct-

ness in drawing and designing; some of his figures being heavy and too short, and the limbs in some parts not being justly sketched in the outline. Though he had spent seven years in Italy in studying those antiques by which other celebrated artists had modelled their taste; though he had examined them with such minute attention as not only to perceive their beauties, but to be qualified to describe them in a Dissertation which he wrote on that subject: yet he seems never to have divested himself of that heavy style of painting, which, being peculiar to his native country, he had insensibly acquired. The astonishing rapidity too with which he painted, made him fall into inaccuracies, from which those works that he finished with care are entirely exempted.

Among his finished pieces may be mentioned the Crucifixion of Jesus Christ between the two Thieves, which was very lately to be seen at Antwerp; but of all his works the paintings in the palace of Luxembourg best display his genius and his style.

It is the observation of Algarotti, that he was more moderate in his movements than Tintoretto, and more soft in his chiaro-scuro than Carravaggio; but not so rich in his compositions, nor so light in his touches, as Paolo Veronese; in his carnations less true than Titian, and less delicate than Vandyck. Yet he contrived to give his colours the utmost transparency and harmony, notwithstanding the extraordinary deepness of them; and he had a strength and grandeur of style entirely his own.

RUBIA, Madder: A genus of the monogynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the 47th order, *Stel-latae*. The corolla is monopetalous and campanulated; and there are two monospermous berries. There are three species, of which the most remarkable is the tinctorum, or dyer's madder, so much used by the dyer's and callico-printers. This hath a perennial root and annual stalk: the root is composed of many long, thick, succulent fibres, almost as large as a man's little finger; these are joined at the top in a head like asparagus, and run very deep into the ground. From the upper part, or head of the root, come out many side-roots, which extend just under the surface of the ground to a great distance, whereby it propagates very fast; for these send up a great number of shoots, which, if carefully taken off in the spring soon after they are above ground, become so many plants. These roots are of a reddish colour, somewhat transparent; and have a yellowish pith in the middle, which is tough and of a bitterish taste. From this root arise many large four-cornered jointed stalks, which, in good land, will grow five or six feet long, and, if supported, sometimes seven or eight: they are armed with short herbaceous prickles; and at each joint are placed five or six spear-shaped leaves: their upper surfaces are smooth: but their midrib on the under side is armed with rough herbaceous spines, and the leaves sit close to the branches in whorls. From the joints of the stalk come out the branches, which sustain the flowers: they are placed by pairs opposite; each pair crossing the other: these have a few small leaves toward the bottom, which are by threes, and upwards by pairs opposite: the branches are terminated by loose branching spikes of yellow flowers, which are cut into four parts resembling stars. These appear in June, and are sometimes succeeded by seeds, which

Rubens,
Rubia.

Rubininska
Rubus.

which seldom ripen in England. For the manner of its cultivation and preparation for the use of dyers, see the article Madder.

Madder-root is used in medicine. The virtues attributed to it are those of a detergent and aperient; whence it has been usually ranked among the opening roots, and recommended in obstructions of the viscera, particularly of the kidneys, in coagulations of the blood from falls or bruises, in the jaundice, and beginning dropsies. It is an ingredient in the icteric decoction of the Edinburgh pharmacopœia.

It is observable, that this root, taken internally, tinges the urine of a deep red colour; and in the Philosophical Transactions we have an account of its producing a like effect upon the bones of animals who had it mixed with their food: all the bones, particularly the more solid ones, were said to be changed, both externally and internally, to a deep red; but neither the fleshy or cartilaginous parts suffered any alterations: some of these bones macerated in water for many weeks together, and afterwards steeped and boiled in spirit of wine, lost none of their colour, nor communicated any tinge to the liquors. This root, therefore, was concluded to be possessed of great subtilty of parts, and its medical virtues hence to deserve inquiry. The same trials, however, made by others, have not been found to produce the same effects as those above-mentioned.—Of late the root has come into great reputation as an emmenagogue.

RUBININSKA, one of the northern provinces of Russia, bounded by the province of Dwina on the north, by Syriane on the east, by Belozera on the south, and by the lake Onega on the west.

RUBRIC, in the canon law, signifies a title or article in certain ancient law-books; thus called because written, as the titles of the chapters in our ancient bibles are, in red letters.

RUBUS, the BRAMBLE, or *Raspberry bush*: A genus of the polygamia order, belonging to the icosan-dria class of plants; and in the natural order ranking under the 35th order, *Senticosa*. The calyx is quinquefid, the petals five; the berry consisting of monospermous acini or pulpy grains. The principal species is the common raspberry, which, with its varieties, demands culture in every garden for their fruit; particularly the common red kind, white sort, and twice-bearing raspberry; all of which are great bearers: but for the general plantations, we choose principally the common red and the white kind, as being generally the greatest bearers of all; planting also a share of the twice-bearing sort, both as a curiosity and for the sake of its autumnal crops of fruit, which in favourable seasons ripen in tolerable perfection; observing to allow all the sorts some open exposure in the kitchen garden, though they will prosper in almost any situation.

The other species are considered as plants of variety, for hardy plantations in the shrubbery. Some of them are also very ornamental flowering plants; particularly the Virginian flowering raspberry, and the double-blossomed bramble, which have great merit as furniture for ornamental compartments; and the white-berried bramble, which is a great curiosity. All the other species and varieties serve to diversify large collections.

Ruby.

RUBY, a genus of precious stones of various colours; as, 1. Of a deep red colour inclining a little to purple; the *carbuncle* of Pliny. 2. The spinell, of the colour of a bright corn poppy flower. 3. The balas or pale red inclining to violet; supposed to be the mother of rubies. 4. The rubicell, of a reddish yellow. According to Cronstedt, the ruby crystallises into an octoedral form, as well as the diamond, from which it differs very little in hardness and weight, whence he concludes that they are both of the same nature; but some late experiments have shown that the diamond differs excessively from all other gems, in being dissipable by a strong fire, which the others resist. Tavernier and Dutens inform us, that in the East Indies all coloured gems are named *rubies*, without regard to what their colours may be; and that the particular colour is added to the name of each in order to distinguish them from one another. There are, however, some soft stones of this kind which they call *bacan*; and it is certain, that the hard and brilliant rubies named *oriental*, as well as the sapphires and topazes, are all the same, excepting only the circumstance of colour. Some are partly red and partly blue, yellow, and some quite colourless. The spinell rubies are about half the value of diamonds of the same weight; the balas is valued at 30 shillings per carat. Tavernier mentions 108 rubies in the throne of the great Mogul, from 100 to 200 carats, and of a round one almost 2½ ounces: there is also mention made by other travellers of rubies exceeding 200 carats in weight. According to Dutens, a perfect ruby, if it weighs more than 3½ carats, is of greater value than a diamond of the same weight. If it weighs one carat, it is worth 10 guineas; if two carats, 40 guineas; three carats, 150 guineas; if six carats, upwards of 1000 guineas.

According to the experiments of Bergman and Achar, the texture of the ruby is foliated like that of diamonds; it is fusible with borax in a strong and long continued heat, running into a transparent glass of a pale green colour: the same effect is produced by microcosmic salt; but with sedative salt, or mineral or vegetable alkali, the glass is opaque and differently coloured. From the experiments of M. d'Arcet, it appears that the ruby does not lose its colour in the greatest fire; but Henckel says, that, by means of a burning glass, he softened it in such a manner as to receive the impression of a seal of jasper. It becomes electric by being rubbed. Its specific gravity, according to Bergman, is from 3,180 to 4,240; but Brissou tells us that it is 4,283. The specific gravity of the spinell is 3,760, of the Brazilian ruby 3,531.

Rubies are met with in the Capelan mountains of Pegu in the East Indies; and at Caos, Ava, Bishnagar, Calicut, Cananor, Ceilan, and Brasil. They are found in the sands of rivers of a red colour, in an argillaceous earth of an hard texture and greenish colour: sometimes they adhere to red rocks. The spinell rubies are met with in Hungary, Silesia, Bohemia, and Brasil. The balas comes principally from Brasil, though some are also brought from the East Indies. The rubicell comes also from Brasil, but are said to lose their colour in the fire. A variety of this gem, but of a soft quality, is found in great plenty on the sea-shore near Ely in Fifeshire, Scotland. There is also a stone which

Ruby

Rudder.

which comes near to the ruby found near Portsoy, Banffshire, and at Inverary, Argyleshire, Scotland. The *rubino di rocca* of the Italians is a true garnet of a deep red and violet, or of the amethyst colour. What is called ruby of arsenic or of sulphur is the realgar: the ruby of zinc is the red blend; and the ruby of silver is the red silver ore.

Rubies may be artificially made from Brazilian topazes of a smoky appearance, by giving them a gradual heat in a crucible filled with ashes, until it be red-hot.

Rock Ruby, the *amethystionta* of the ancients, is found in Syria, Calcutta, Cananor, Cambaya, and Ethiopia. It is the most valued of all the species of garnets, and is frequently sold as a ruby under the name of *rubinus Russicum*. See GARNET and RUBY.

RUCTION, a ventosity arising from indigestion, and discharging itself at the mouth with a very disagreeable noise.

RUDBECK (Olaus), a learned Swedish physician, born of an ancient and noble family in 1630. He became professor of medicine at Upsal, where he acquired great applause by his extensive knowledge; and died in 1702. His principal works are, 1. *Exercitatio anatomica, exhibens ductus novos hepaticos aquosos, & vasa glandularum serosa*, in 4to. He there asserts his claim to the discovery of the lymphatic vessels, against the pretensions of Thomas Bartholin. 2. *Athlantica, sive Manheim, vera Japheti posterorum sedes ac patria*, 4 vols folio, is full of strange paradoxes supported with profound learning: he there endeavours to prove, that Sweden was the country whence all the ancient Pagan divinities and our first parents were derived; and that the Germans, English, French, Danes, Greeks, and Romans, with all other nations, originally came from thence.

RUDBECKIA, in botany: a genus of the polygamia frustanea order, belonging to the syngenesia class of plants; and in the natural method ranking under the 49th order, *Compositae*. The receptacle is paleaceous and conical; the pappus consists of a quadridentate margin; the calyx of a double series of scaly leaves.

RUDDER, in navigation, a piece of timber turning on hinges in the stern of the ship, and which, opposing sometimes one side in the water and sometimes another, turns or directs the vessel this way or that. See HELM.

In the seventh volume of the Transactions of the Society instituted at London for the Encouragement of Arts, Manufactures, and Commerce, there is explained a method of supplying the loss of a ship's rudder at sea. The invention, which is Captain Pakenham's of the royal navy, has been approved by Admiral Cornwallis, the commissioners of the admiralty, by the society in whose transactions the account of it was first published, and who presented to Captain Pakenham their gold medal, by the Trinity-house, by the managing owners of East India shipping, by the duke of Sudermania the present regent of Sweden, and by the society for the improvement of naval architecture. The substitute here recommended for a lost rudder, says the inventor, is formed of those materials without which no ship goes to sea, and its construction is simple and speedy. Captain Pakenham, however, did not give a particular ac-

count of his invention to the society whom he addressed, and to whom he sent a model of his invention, till such time as he had an opportunity of reducing the theory he had conceived to practice. On the 7th of July 1788, he made this trial with the *Merlin* of Newfoundland; and he declares that, during the different manœuvres of tacking and wearing, he could not discover the least variation between the operation of the machine and that of the ship's rudder: she was steered with the same ease by one man, and answered the helm in every situation fully as quick. Admiral Cornwallis certifies the same with respect to the *Crown* of 64 guns, which lost her rudder on the Kentish Knock, when with the substitute she was steered to Portsmouth with the utmost ease in a heavy gale, and, as the admiral asserts, it would have taken her to the East Indies.

The materials and construction are thus described in the Transactions. "N^o 1. a top-mast inverted; the fid-hole to ship the tiller in, and secured with hoops from the anchor stocks; the heel forming the head of the rudder. N^o 2. The inner half of a jibb-boom. N^o 3. The outer half of a jibb-boom. N^o 4. A fish: the whole of these materials well-bolted together:—in a merchantman her ruff-tree. N^o 5. A cap, with the square part cut out to fit the stern-post, and acting as a lower gudgeon, secured to the stern-post with hawsers, leading from the bolts of the cap, under the ship's bottom, into the hawse-holes, and hove well tort. N^o 6. A plank, or, if none on board the ships, gangboards. N^o 7. Anchor-stocks, made to fit the topmast as partners, secured to the deck, and supplying the place of the upper gudgeon, and in a merchant-ship the clamps of her wind-lafs. N^o 8. A stern-post. N^o 9. Hoops from the anchor stocks. N^o 10. Pigs of ballast, to sink the lower part. The head of the rudder to pass through as many decks as you wish."

On this the Captain makes the following remarks: "It might probably be supposed, that a difficulty would occur in bringing the jaws of the cap to embrace the stern-post; but this will at once be obviated, when it is remembered that the top-chains, or hawsers, leading from each end of the jaws, under the ship's bottom, are in fact a continuance of the jaws themselves. Nor can it be apprehended that the cap, when fixed, may be impelled from its station, either by the efforts of the sea, or the course of the ship through the water, tho' even the hawsers, which confine it in the first instance, should be relaxed:—the experiment proves, that the partners must be first torn away, or the main-piece broken off.

"Since the improved state of navigation, notwithstanding remedies have been found in general for the most disastrous accidents at sea, experience has evinced that nothing complete, had been hitherto invented to supply the loss of a rudder. The first expedient within my knowledge were cables veered astern, with tackles leading from them to the ship's quarters. This practice was superseded by the invention of the machine usually called the *Ipswich machine*; but the construction of it is complex and unwieldy, and vessels are seldom found in possession of the materials which form it. Commodore Byron, in the *Journal* of his Voyage round the World, says, that the *Tamer*, with every assistance from his own ship, was five days in constructing it. Besides, like the before

Rudder.

Plate
CCCCXLII

Ruddiman. before-mentioned scheme, it can only operate to steer a ship large (and that but very wildly), and of course, under the circumstance of a lee-shore, defeat the most skilful exertions of a seaman. Several other expedients have been adopted, which I shall not mention here, as the same defects equally appear in all.

"Thus it was apparent, that ample room was left for the discovery of some more certain resource than any of the former; and the scheme which has suggested itself to me, will, I trust, be found fully to answer the purpose intended. The materials are such as scarcely any ship can venture to sea without; and the construction so speedy, easy, and simple, that the capacity of the meanest sailor will at once conceive it. I need not, from mathematical principles, show the certainty of its effect, as it is formed and managed in the same manner as a ship's common rudder: and as the common rudder is certainly of all inventions the best calculated for guiding a vessel through the water, it will of course follow, that whatever substitute the nearest resembles that, must be best adapted to supply its loss."

RUDDIMAN (Thomas), one of the most eminent grammarians which Scotland has produced, was born in October 1674 at Raggel, in the parish of Boyndie and county of Banff. His father James Ruddiman was a farmer, and strongly attached to the house of Stuart.

Mr Ruddiman was instructed in the principles of Latin grammar at the parish-school of Boyndie, where his application was so vigorous, and his progress so rapid, that he quickly surpassed all his class-fellows. His master George Morison, who was a skilful and attentive teacher, being unwilling to check his ardour for learning, permitted him to follow the impulse of his genius, and to advance without waiting the slow progress of the other boys.

The pleasure which the youthful mind receives from vivid description, though wild and romantic, approaches to ecstacy, and often makes an impression which remains indelible. While at school, the first book which charmed the opening mind of Ruddiman was Ovid's *Metamorphoses*; nor did he cease to relish the beauties of this author when his judgment was mature, for during the rest of his life Ovid was his favourite poet.

At the age of sixteen he became anxious to pursue his studies at the university; but his father thinking him too young, opposed his inclination. Hearing of the competition trial, which was annually held at King's college, Aberdeen, for a certain number of burfaries on the foundation of that university, Ruddiman's ambition was kindled. Without the knowledge of his father, and with only a single guinea in his pocket, which his sister had privately given him, he set out for that place. On the road he was met by a company of gypsies, who robbed him of his coat, his shoes, his stockings, and his guinea. This misfortune did not damp his enterprising spirit: He continued his journey to Aberdeen, presented himself before the professors as a candidate; and though he had neither clothes to give him a decent appearance nor friends to recommend him, he gained the first prize.

After attending the university four years, he obtained the degree of master of arts; an honour of which he was always proud. The thesis says, the disputation on this occasion lasted *ab aurora usque ad vespertum*, i. e.

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"from morning till night." Tho' Ruddiman was only twenty years of age when he left the university, it appears from a book intitled *Rhetoricorum Libri tres*, composed before this period, but never published, that he had then read the Roman classics with uncommon attention and advantage.

He was soon after engaged as a tutor to the son of Robert Young, Esq; of Auldbar, the great grandson of Sir Peter Young, who under the direction of Buchanan had been preceptor of James VI. His income here must have been very small, or his situation unpleasant; for within a year he accepted the office of schoolmaster in the parish of Laurence-kirk. The profession of schoolmaster in a country-parish at that period could open no field for ambition, nor prospect of great emolument; for by an act of parliament passed in 1633, the salary appropriated to this office could not be increased above 200 merks Scots, or L. 11 : 2 : 2½ Sterling. In discharging the duties of this humble but important station, it is probable that he used Simson's *Rudimenta Grammatica*, which was then generally taught in the northern schools, and by which he himself had been instructed in the principles of Latin grammar.

When Ruddiman had spent three years and a half in this employment, the celebrated Dr Pitcairne happening to pass through Laurence-kirk, was detained in that village by a violent storm. Pitcairne wanting amusement, inquired at the hostess if she could procure any agreeable companion to bear him company at dinner. She replied, that the schoolmaster, though young, was said to be learned, and, though modest, she was sure could talk. Pitcairne was delighted with the conversation and learning of his new companion, invited him to Edinburgh, and promised him his patronage.

When Ruddiman arrived in Edinburgh, the advocates library, which had been founded eighteen years before by Sir George Mackenzie, attracted his curiosity and attention, and he was soon after appointed assistant-keeper under Mr Spottiswoode the principal librarian. His salary for executing this laborious office was L. 8 : 6 : 8. He had besides a small honorary present from those who were admitted advocates for correcting their theses: he was also paid for copying manuscripts for the use of the library. And the faculty, before he had held the office two years, were so highly pleased with his conduct, that they made him a present of 50 pounds Scots, or L. 4 : 3 : 4 Sterling.

During the sitting of the court of session he attended the library from ten till three. But this confinement did not prevent him from engaging in other laborious duties: A part of his time was occupied in teaching young gentlemen the Latin language. Some he attended at their lodgings, some waited upon him, and some resided in his own house. An exact list of the names of those who attended him, expressing the date of their entry, and the sums which he was to receive from each, has been found in his pocket-book; a curious relic, which is still preserved.

When Ruddiman's merit as a scholar became better known, his assistance was anxiously solicited by those who were engaged in literary publications. Freebairne, a respectable bookseller of that period, prevailed upon him to correct and prepare for the press Sir Robert Sibbald's *Introductio ad historiam rerum a Romanis gestarum in ea Borealis Britanniae parte qua ultra murum*

Ruddiman. *Pitricum est.* He received for his labour L. 3 Sterling. At the request of Mr Spottiswoode librarian, for L. 5 Sterling he contributed his aid to the publication of Sir Robert Spottiswoode's *Practiques of the Laws of Scotland*.

In 1707 he commenced auctioneer, an employment not very suitable to the dignified character of a man of letters: but to this occupation he was probably impelled by necessity; for upon balancing his accounts at the end of the preceding year, the whole surplus was L. 28, 2s. with prospects of L. 236 : 7 : 6 Scots. Ruddiman had a family; and seems to have been a stranger to that foolish pride which has seduced some literary men into the opinion, that it is more honourable to starve than have recourse to an occupation which men of rank and opulence are accustomed to despise. The same year he published an edition of *Voluseni de Animi Tranquillitate Dialogus*, to which he prefixed the life of Volusenus. Volusenus or Wilson was a learned Scotsman, and had the honour to be patronised by Cardinal Wolsey (see WILSON). In 1709 he published *Johnstoni Cantici Solomonis Paraphrasis Poetica*, and *Johnstoni Cantica* with notes, which he dedicated in verse to his friend and patron Dr Pitcairne. The edition consisted of 200 copies. The expence of printing amounted to L. 5, 10 s. Sterling, and he sold them at a shilling each copy.

The philological talents of Ruddiman were next directed to a more important object, in which they became more conspicuous and useful. Freebairne the bookseller proposed to publish a new edition of the Scottish translation of Virgil's *Æneid* by Gawin Douglas bishop of Dunkeld. Of the contributions which some eminent characters of the age presented, the most valuable were supplied by Ruddiman. Freebairne acknowledged in general terms this obligation, but has not done him the justice to inform the reader what these valuable contributions were, and Ruddiman's modesty restrained him from publicly asserting his claim. From the pocket-book which has been already mentioned, it appears that Ruddiman corrected the work and wrote the glossary; and there is strong reason to believe that he was the author of the 42 general rules for assisting the reader to understand the language of Douglas. To those who wish to be acquainted with the ancient language of this island, the glossary will be a treasure, as it forms a compendious dictionary of the Anglo-Saxon. For this elaborate work Ruddiman was allowed L. 8 : 6 : 8 Sterling.

The reputation of Ruddiman had now extended to a distance. He was invited by the magistrates of Dundee to be rector of the grammar-school of that town; but the faculty of advocates, anxious to retain him, augmented his salary to L. 30 : 6 : 8 Sterling, and he declined the offer.

In 1711 he assisted Bishop Sage in publishing Drummond of Hawthornden's works; and performed the same favour to Dr Abercrombie, who was then preparing for the press his *Martial Atchievements*.

In 1713 he was deprived of his friend Dr Pitcairne. On this occasion he testified all the respect which friendship could inspire to the memory of his deceased patron and surviving family. He composed Pitcairne's epitaph, and conducted the sale of his library, which was disposed of to Peter the Great.

In 1714 the Rudiments of the Latin tongue were published. Eighteen or nineteen Latin grammars, composed by Scotchmen, had appeared before this period; yet such is the intrinsic value of this little treatise, that it soon superseded all other books on the subject, and is now taught in all the grammar-schools in Scotland. It has also been translated into other languages.

He was next called upon to publish the works of Buchanan. The value of these he enhanced much by an elaborate preface, his *Tabula Regum Scotiae Chronologica*, and *Proprium Nominum Interpretatio*. The interpretation of proper names was highly requisite; for Buchanan has so disguised them in the Roman dress, that the original name is scarcely discernible; and the preface puts the reader on his guard against the chronological errors and factious spirit of the history. Ruddiman also added a learned dissertation, intitled *De Metris Buchananæis Libellus*, and subjoined annotations critical and political on the History of Scotland. As he espoused the cause of Queen Mary, he raised against himself an host of enemies, and gave occasion to that celebrated controversy which has been carried on with much keenness and animosity, and with little intermission, even to the present times. For this work Ruddiman was promised L. 40 Sterling.

He had now been so long accustomed to superintend the press, that he was led to form the plan of erecting a printing-office himself (A). Accordingly, in the year 1715, he commenced printer in partnership with his brother Walter, who had been regularly bred to the business. Some years after he was appointed printer to the university, along with James Davidson bookseller.

The first literary society formed in Scotland was instituted in the year 1718. It probably derived its origin from the factious and turbulent spirit of the times. The learned, anxious perhaps to find some respite from the political dissensions of the day, endeavoured to procure it in elegant amusement; for one of the fundamental articles of the new association was, that the "affairs of church and state should not be introduced." Ruddiman and the masters of the high-school had the honour to found this society. They were afterwards joined by Lord Kaimes.

In 1725 the first part of his *Grammaticæ Latine Institutiones*, which treated of etymology, was published. The second part, which explained the nature and principles of syntax, appeared in 1731. He also wrote a third part on prosody, which is said to be more copious and correct than any other publication on the subject. When urged to give it to the public, he said dryly, "The age has so little taste, the sale would not pay the expence." Of this work he published an abridgement,

(A) It has long been an object of curiosity to ascertain the time at which the art of printing was introduced into Scotland. Mr Robertson, the keeper of the records, has lately discovered a patent of King James IV. which renders it certain that a printing-press was first established at Edinburgh during the year 1507, 30 years after Caxton had brought it into England. See PRINTING, p. 522.

Ruddiman sent, to which he subjoined an abstract of his prodigy.

Ruddiman next engaged in the management of a newspaper, an employment for which his genius and industry seemed to render him well qualified. But those who should expect either much information or amusement from this publication, would perhaps be greatly disappointed. The newspaper which he conducted was the Caledonian Mercury, and was established in 1720 by William Rolland a lawyer. Ruddiman acted only in the capacity of printer for five years; but upon the death of Mr Rolland in 1729, the property was transferred to him, or to his brother Walter and him conjointly. This paper continued in the family of Ruddiman till the year 1772, when it was sold by the trustees of his grandchildren to Mr John Robertson.

The Caledonian Mercury was at first printed three times a week, on Monday, Tuesday, and Thursday, in a small 4to of four pages, with two columns in each page, and 50 lines in each column; so that the whole paper contained only 400 lines. It now contains in its folio size 2480 lines.

Mr Ruddiman, after the death of Mr Spottiswoode librarian, remained for some time in his former station; but was at length appointed keeper of the library, tho' without any increase of salary; and some years after Mr Goodal, the defender of Queen Mary, succeeded him in the office of sub-librarian.

The assiduous application of Ruddiman, supported by such learning, was intitled to wealth, which now indeed flowed upon him in what was at that period deemed great abundance. On the 1st of October 1735, it appeared from an exact statement of his affairs, that he was worth L. 1882 : 5 : 2 Sterling; and on the 20th of May, the ensuing year, his wealth had increased to L. 1985 : 6 : 3 Sterling. In 1710 he valued his effects at L. 24 : 14 : 9 Sterling.

In 1737 the schoolmasters and teachers in Edinburgh formed themselves into a society, in order to establish a fund for the support of their wives and children. Of this scheme Ruddiman was an active promoter, and was chosen treasurer. Perhaps it was this association which in 1742 gave the idea to the Scots clergy of forming their widows fund.

In 1739 he published *Selectus Diplomatum et Numismatum Scotie Thesaurus*. This work was projected and begun by Anderson (hence called *Anderson's Diplomata*), but was finished by Ruddiman. The preface, which is an excellent commentary on Anderson's performance, was written by Ruddiman, and displays a greater extent of knowledge than any of his other productions.

As Ruddiman had imbibed from his father those political principles which attached him to the family of Stuart, he probably did not remain an unconcerned spectator of the civil commotions which in 1745 agitated Scotland. He did not, however, take any active part in the rebellion. His principles, he has been heard to say, induced him to be a quiet subject and a good citizen. He retired to the country during the summer of 1745; and while his fellow-citizens were spilling each others blood, he was more happily engaged in writing *Critical Observations on Burman's Commentaries on Lucan's Pharsalia*. The Caledonian Mercury was in the mean time marked with a jealous eye. His son,

who had for some time been the principal manager of that newspaper, having copied a paragraph which was reckoned seditious from an English paper, was imprisoned. The solicitation of his father procured his release: but it was too late; for the unhappy young man had contracted a distemper in the tolbooth of Edinburgh which brought him to his grave.

During the last seventeen years of his life Ruddiman was almost incessantly engaged in controversy. To this he was in some measure compelled by the violent attacks which some critics of the times had successively made upon his works. He was first called upon by Benson, auditor in the exchequer, to determine the comparative merit of Buchanan and Johnston as poets. He gave a decided preference to Buchanan in perspicuity, purity, and variety of style; but, like a candid critic, allowed Johnston to be superior in the harmony of his numbers. His next antagonist was Logan, one of the ministers of Edinburgh, a weak illiterate man, but an obstinate polemic. The subject of contest was, whether the crown of Scotland was strictly hereditary, and whether the birth of Robert III. was legitimate? Ruddiman maintained the affirmative in both points, and certainly far surpassed his antagonist in the powers of reasoning. He proved the legitimacy of Robert by the public records of the kingdom with a force of argument which admits of no reply; but in discussing the first question (by which he was led to consider the contest between Bruce and Baliol) he was not so successful: for there are many instances in the history of Scotland in which the brother succeeded to the crown in preference to the son. He showed, however, that the Scottish crown was at no period properly elective; and that, according to the old licentious constitution of the kingdom, the right of Bruce, who was the nearest in blood to the royal stock, was preferable to the claim of Baliol though descended from the eldest daughter.

But the labours of Ruddiman did not end when the pen dropt from the feeble hand of Logan. He was soon called upon to repel the attacks of Love schoolmaster of Dalkeith, who maintained, in opposition to him, that Buchanan had neither repented of his treatment of Queen Mary, nor had been guilty of ingratitude to that princess. That Buchanan ever repented there is reason to doubt. Whether he was guilty of ingratitude, let the unbiassed determine, when they are assured by authentic records that Mary conferred on him a pension for life of 500 pounds Scots.

When Ruddiman had arrived at his eightieth year, and was almost blind, he was assailed by James Man, master of an hospital at Aberdeen, with a degree of rancour and virulence, united with some learning and ability, which must have touched him in a sensible manner, and alarmed his fears for his reputation after his decease. He was called a *finished pedant*, a *furiosus calumniator*, and a *corrupter of Buchanan's works*. The venerable old man again put on his armour, entered the lists, and gained a complete victory. Man, with all his acuteness, could only point out twenty errors in two folio volumes. Some of these were typographical, some trifling, and some doubtful. Ruddiman, with much pleasantry, drew up against Man an account of 469 errors, consisting of 14 articles, of which two or three may be produced as a specimen. 1. Falsehoods and prevarications, 20. 2. Absurdities, 69. 3. Passages from classic

Ruddiman, classic authors which were misunderstood by Man, 10.
Rudesheim. The triumph which he gained over this virulent adversary he did not long enjoy; for he died at Edinburgh on the 19th of January 1757, in the 83d year of his age, and was buried in the Grey Friars churchyard without any monument to distinguish his grave.

He was three times married, but left behind him only one daughter, Alison, who was married in 1747 to James Stewart, Esq. He is supposed to have died worth L. 3000 Sterling.

He was of the middle size, of a thin and straight make, and had eyes remarkably piercing. Of his talents and learning his works afford the most satisfactory proofs. His memory was tenacious and exact. He could repeat long passages of his favourite poet Ovid, to the amount of 60 lines, and without omitting a word. He was so great a master in the Latin language, that he has perhaps been equalled by none since the days of Buchanan.

Ruddiman has left a character unstained by vice, and distinguished by many virtues. His piety was exemplary. He spent Sunday in religious employment; and we are informed had prayers read to him every morning by his amanuensis when the infirmities of age required such an assistant. He was frugal of his time, neither indolent nor fond of amusement; and so remarkably temperate, that it is said he was never intoxicated. Though often forced into controversy, and treated with insolence, he never descended to scurrility and abuse, nor cherished resentment against his enemies. His candour was much admired in one instance in the favourable character which he published in the Caledonian Mercury of his antagonist Love (B), after his decease. Upon the whole, it must be allowed that Ruddiman has been of great service to classical literature, and an honour to his native country.

RUDESHEIM, a rich village of the Rhinegau, situated about five miles from the city of Mentz, contains about 2500 inhabitants. The wine of this place is looked upon as without comparison the best of the Rhinegau, and consequently of all Germany. Baron Riesbeck says, he found it much more fiery than that of Hochheim; but that for pleasantness of taste there is no comparison betwixt them. The best Rudesheim, like the best Hochheimer, sells upon the spot for three guilders the bottle. "You can (says our author) have no tolerable wine here for one guilder, nor any very good for two; at least I should prefer the worst Burgundy I ever tasted to any Rudesheimer I met with either here or at Mentz for these prices. Indeed the wine of our host (a rich ecclesiastic) was far better than any we could get at the inn. It stands to reason, that the same vintage furnishes grapes of very different degrees of goodness; but besides this, it is in the Rhi-

negau as every where else. The best wines are generally sent abroad by the poor and middling inhabitants, and the worst kept for internal consumption; for the expense of the carriage being the same in both cases, strangers had much rather pay a double price for the good than have the bad. It is only rich people, such as our host was, who can afford to keep the produce of their land for their own drinking. Upon this principle, I have eaten much better Swiss cheeses out of Switzerland than in it, and have drank much better Rhenish in the inns of the northern parts of Germany than in the country where the wine grows. The position of the country also contributes to render the wine dearer than it would otherwise be. As the best wine grows in its more northern parts, the easy transport by the Rhine to Holland, and all parts of the world, raises its price above its real value. The place where the flower of the Rudesheim wine grows is precisely the neck of the land, formed by the winding of the Rhine to the north, after it has run to the westward from Mentz hither. This neck, which is a rock almost perpendicular, enjoys the first rays of the rising and the last of the setting sun. It is divided into small low terraces, which are carried up to the utmost top of the hill like steep stairs; these are guarded by small walls and earthen mounds, which are often washed away by the rain. The first vine was brought hither from France, and they still call the best grape the Orleanois. They plant the vine stocks very low, scarce ever more than four or five feet high. This way of planting the vine is favourable to the production of a great deal of wine, but not to its goodness, as the phlegmatic and harsh parts of it would certainly evaporate more, if the sap was refined through higher and more numerous canals. This is undoubtedly the reason why every kind of Rhenish has something in it that is harsh, sour, and watery. The harvest of the best vineyards, which are the lower ones, in the above-mentioned neck of land, is often bought before-hand, at the advanced price of some ducats, by Dutch and other merchants. It must be a very rich stock to yield above four measures of wine.—You may easily imagine, that the cultivation of vineyards must be very expensive in this country, as the dung, which is extremely dear, must be carried up to the top of the mountains on the peasants shoulders."

RUDIMENTS, the first principles or grounds of any art or science, called also the elements thereof.

RUE, in botany. See **RUTA**.

RUE (Charles de la), a French orator and poet, was born at Paris in 1643. He was educated at the college of the Jesuits, where he afterwards became a professor of humanity and rhetoric. At an early age his talent for poetry disclosed itself. In 1667, when he was only 24 years old, he composed a Latin poem on the conquests of Louis XIV. which was so much esteemed by the

(B) The following character of Love was published in the Caledonian Mercury of the 24th of September 1750. "On Thursday morning died at Dalkeith, after a lingering illness, in the 55th year of his age, Mr John Love, rector of the grammar-school there; who, for his uncommon knowledge in classical learning, his indefatigable diligence, and strictness of discipline without severity, was justly accounted one of the most sufficient masters in this country." This character is doubtless just; though Love is now known to have been the school-master satirized by Smollet in the beginning of his *Roderick Random*.

Rue,
Ruella.

the celebrated Peter Corneille, that he translated it into French, presented it to the King, and at the same time passed so high encomiums on the superior merit of the original, that the author was received into the favour of that monarch, and ever after treated by him with singular respect.

De la Rue, anxious to preach the gospel to the Canadians, requested leave of absence from his superiors; but having destined him for the pulpit, they refused to comply with his request. Accordingly he commenced preacher, and became one of the most eminent orators of his age. In his discourses he would probably have been too lavish of his wit, if he had not been cautioned against it by a judicious courtier. "Continue (said he) to preach as you do. We will hear you with pleasure as long as you reason with us; but avoid wit. We value the wit contained in two verses of a song more than all that is contained in most of the sermons in Lent."

Respecting the delivery of sermons, he entertained an opinion quite opposite to the established practice of his countrymen. In France it was customary not to read sermons from the pulpit, but to recite them from memory. This he considered as a laborious task not compensated by any advantages. On the contrary, he was of opinion that reading sermons was preferable. — The preacher, with his discourse before him, could read it with ease, free from that timidity and embarrassment which frequently attends the act of recollection; and he would save a considerable time which is usually spent in committing it to memory. In these sentiments many will not be disposed to acquiesce: but, without pretending to determine the question, it may be asserted, that a sermon, whether read or recited, if spoken in a serious manner, and with proper inflections and tones of voice, will produce all the effects for which a sermon is calculated.

De la Rue died at Paris on the 27th of May 1725, at the age of 82.

He was as amiable in society as he was venerable in the pulpit. His conversation was pleasant and instructive. His taste and knowledge enabled him to converse with ease, and to express himself with propriety on every subject. He charmed his superiors by his wit, and his inferiors by his affability. Though living amidst the bustle of the world, he was always prepared for the solitude of the closet and the retreat of the cloister. In the pulpit he poured forth the finest effusions of eloquence in the most animated and impressive manner. — He published Panegyrics, Funeral Orations, and Sermons. His best sermon is that intitled *Des Calamités Publiques*, and his most admired funeral oration was composed on the Prince of Luxemburg. There are also tragedies of his writing, both in Latin and French, which were approved by Corneille. He was one of those who published editions of the classics for the use of the Dauphin. *Virgil*, which fell to his share, was published with notes, and a *Life of the Poet*, in 1675, 4to, and is a valuable and useful edition.

RUELLIA, in botany: A genus of the angiospermia order, belonging to the didynamia class of plants; and in the natural method ranking under the 40th order, *Personata*. The calyx is quinquepartite; the corolla sub-campanulated; the stamina approaching together in pairs; the capsule springing asunder by means of its elastic segments.

RUFF, in ichthyology; a species of PERCA.

RUFF, in ornithology, a species of TRINGA.

RUFFHEAD (Dr Owen), was the son of his Majesty's baker, in Piccadilly; who buying a lottery ticket for him in his infancy, which happened to be drawn a prize of 500l. this sum was applied to educate him for the law. He accordingly entered in the Middle Temple; and seconded so well the views of his father, that he became a good scholar and an acute barrister. While he was waiting for opportunities to distinguish himself in his profession, he wrote a variety of pamphlets on temporary politics; and was afterwards distinguished by his accurate edition of *The Statutes at Large*, in 4to. He now obtained good business, though more as a chamber-counsellor in framing bills for parliament than as a pleader; but his close application to study, with the variety of works he engaged in as an author, so impaired his constitution, that after the last exertion of his abilities to defend the conduct of administration toward Mr Wilkes, by a pamphlet intitled, "The Case of the late election for the county of Middlesex considered," he was prevented from receiving the reward of a place in the Treasury, by dying in 1769, at about 46 years of age. Some time before his death, bishop Warburton engaged him to write his long promised *Life of Alexander Pope*; which, however, when executed, was very far from giving general satisfaction. The author attributed his ill success to the deficiency of his materials; while the public seemed rather to be of opinion that, as a lawyer, he ventured beyond his proper line, when he assumed the task of a critic in poetry.

RUFFLING, or RUFFING, a beat on the drum. Lieutenant-generals have three ruffles, major-generals two, brigadiers one, and governors one, as they pass by the regiment, guard, &c.

RUFINUS was born about the middle of the fourth century at Concordia, an inconsiderable town in Italy. At first he applied himself to the belles lettres, and particularly to the study of eloquence. To accomplish himself in this elegant art, he removed to Aquileia, a town at that time so celebrated that it was called a second Rome. Having made himself acquainted with the polite literature of the age, he withdrew into a monastery, where he devoted himself to the study of theology. While thus occupied, St Jerome happened to pass through Aquileia. Rufinus formed an intimate friendship with him; but to his inexpressible grief was soon deprived of the company of his new friend, who continued his travels through France and Germany, and then set out for the east. Rufinus, unable to bear his absence, resolved to follow him. Accordingly he embarked for Egypt; and having visited the hermits who inhabit the deserts of that country, he repaired to Alexandria to hear the renowned Didymus. Here he was gratified with a sight of St Melania, of whose virtue and charity he had heard much. The sanctity of his manners soon obtained the confidence of St Melania, which continued without interruption during their residence in the east, a period of 30 years. The Arians, who swayed the ecclesiastical sceptre in the reign of Valens, persecuted Rufinus with great cruelty. They threw him into a dungeon, loaded him with chains, and after almost starving him to death, banished him to the deserts of Palestine. From this exile he was relieved by the pecuniary aid of St Melania, who employed her wealth in ransoming those

Ruff
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Rufinus.

Rufinus
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Ruins.

confessors who had been condemned to prison or banishment.

St Jerome, supposing that Rufinus would immediately proceed to Jerusalem, wrote to one of his friends there, congratulating him on the prospect of so illustrious a visitor. To Jerusalem he went, and having built a monastery on the Mount of Olives, he there assembled a great number of hermits, whom he animated to virtue by his exhortations. He converted many to the Christian faith, and persuaded more than 400 hermits who had taken part in the schism of Antioch to return to the church. He prevailed on many Macedonians and Arians to renounce their errors.

His attachment to the opinions of Origen set him at variance with St Jerome, who, being of a temper peculiarly irritable, not only retracted all the praises which he had lavished upon him, but loaded him with severe reproaches. Their disputes, which were carried to a very indecent height, tended to injure Christianity in the eyes of the weak. Theophilus, their mutual friend, settled their differences; but the reconciliation was of short continuance. Rufinus having published a translation of the principles of Origen at Rome, was summoned to appear before Pope Anastasius. But he made a specious apology for not appearing, and sent a vindication of his work, in which he attempted to prove that certain errors, of which Origen had been accused, were perfectly consistent with the opinions of the orthodox. St Jerome attacked Rufinus's translation. Rufinus composed an eloquent reply, in which he declared that he was only the translator of Origen, and did not consider himself bound to sanction all his errors. Most ecclesiastical historians say that Rufinus was excommunicated by Pope Anastasius; but for this no good evidence has been brought. In 407, he returned to Rome; but the year after, that city being threatened by Alaric, he retired to Sicily, where he died in 410.

His works are, 1. A Translation of Josephus; 2. A Translation of several works of Origen; 3. A Latin Version of Ten Discourses of Gregory Nazianzen, and Eight of Basil's; 4. Chromatius of Aquileia prevailed on him to undertake a Translation of the Ecclesiastical History of Eusebius, which engaged him almost ten years. He made many additions to the body of the work, and continued the history from the 20th year of Constantine to the death of Theodosius the Great. Many parts of this work are negligently written, many things are recorded as facts without any authority but common report, and many things of great importance are entirely omitted. 5. A Vindication of Origen. 6. Two Apologies addressed to St Jerome. 7. Commentaries on the prophets Hosea, Joel, and Amos. 8. Lives of the Hermits. 9. An Explanation of the Creed.

RUGEN, an island in the Baltic Sea, on the coast of Pomerania, over against Stralsund, about 23 miles in length and 15 in breadth, with the title of a principality. It is strong both by art and nature, abounds in corn and cattle, and belongs to Sweden. The chief town is Bergen. E. Long. 14. 30. N. Lat. 54. 32.

RUINS, a term particularly used for magnificent buildings fallen into decay by length of time, and whereof there only remains a confused heap of materials. Such are the ruins of the tower of Babel, of the tower of Belus, two days journey from Bagdat, in Syria, on

the banks of the Euphrates; which are now no more than a heap of bricks, cemented with bitumen, and whereof we only perceive the plan to have been square. Such also are the ruins of a famous temple, or palace, near Schiras, in Persia, which the antiquaries will have to have been built by Ahafuerus, and which the Persians now call Tchelminar, or Chelminar; *q. d.* the 40 columns; because there are so many columns remaining pretty entire, with the traces of others; a great quantity of basso-relievos, and unknown characters, sufficient to shew the magnificence of the antique architecture. The most remarkable ruins now existing of whole cities are those of PALMYRA and PERSEPOLIS, of the grandeur of which some idea may be formed from the views given in the plates referred to from these articles, to which may be added those of HERCULANEUM and POMPEIUM. The magnificent ruins still remaining in Rome, Athens, &c. of particular edifices, as temples, palaces, amphitheatres, aqueducts, baths, &c. it were endless to enumerate, and beyond the plan of this work to represent.

RUIZIA, in botany: A genus of the polyandria order, belonging to the monodelphia class of plants; and in the natural method ranking under the 37th order, *Columnifera*. The calyx is double; the external are triphyllous; the internal are parted into five. The corolla consists of five petals, inclining to the right hand side, and adhering to the stamina, which are from 30 to 40. It has ten styli, and as many capsulae. These are compressed and membranous. In each capsule are two seeds. There are four species, viz. 1. *Cordata*; 2. *Lobata*; 3. *Palmata*; 4. *Lacinata*, all natives of Asia and the Cape of Good Hope.

RULE, in matters of literature, a maxim, canon, or precept, to be observed in any art or science.

RULE, in a monastic sense, a system of laws or regulations, whereby religious houses are governed, and which the religious make a vow, at their entrance, to observe. Such are the rules of the Augustins, Benedictins, Carthusians, Franciscans, &c. See AUGUSTINS, &c.

RULES of Court, in law, are certain orders made from time to time in the courts of law, which attorneys are bound to observe, in order to avoid confusion; and both the plaintiff and defendant are at their peril also bound to pay obedience to rules made in court relating to the cause depending between them.

It is to be observed, that no court will make a rule for any thing that may be done in the ordinary course; and that if a rule be made, grounded upon an affidavit, the other side may move the court against it, in order to vacate the same, and thereupon shall bring into court a copy of the affidavit and rule. On the breach and contempt of a rule of court an attachment lies; but it is not granted for disobedience to a rule, when the party has not been personally served; nor for disobeying a rule made by a judge in his chamber, which is not of force to ground a motion upon, unless the same be entered.

A rule of court is granted every day the courts at Westminster sit, to prisoners of the King's-bench or Fleet prisons, to go at large about their private affairs.

RULE of Three. See ARITHMETIC and PROPORTION.

RULE, or Ruler, an instrument of wood or metal, with several lines delineated on it; of great use in

Ruizia,
Rule.

Rum. practical mensuration. When a ruler has the lines of chords, tangents, sines, &c. it is called a *plane scale*.

RUM, a species of brandy or vinous spirits, distilled from sugar-canes.

Rum, according to Dr Shaw, differs from simple sugar-spirit, in that it contains more of the natural flavour or essential oil of the sugar-cane; a great deal of raw juice and parts of the cane itself being often fermented in the liquor or solution of which the rum is prepared. The unctuous or oily flavour of rum is often supposed to proceed from the large quantity of fat used in boiling the sugar; which fat, indeed, if coarse, will usually give a stinking flavour to the spirit in our distillations of the sugar liquor or wash, from our refining sugar-houses; but this is nothing of kin to the flavour of the rum, which is really the effect of the natural flavour of the cane.

The method of making rum is this: When a sufficient stock of the materials are got together, they add water to them, and ferment them in the common method, though the fermentation is always carried on very slowly at first; because at the beginning of the season for making rum in the islands, they want yeast or some other ferment to make it work: but by degrees, after this, they procure a sufficient quantity of the ferment, which rises up as a head to the liquor in the operation; and thus they are able afterwards to ferment and make their rum with a great deal of expedition, and in large quantities.

When the wash is fully fermented, or to a due degree of acidity, the distillation is carried on in the common way, and the spirit is made up proof: though sometimes it is reduced to a much greater strength, nearly approaching to that of alcohol or spirit of wine; and it is then called *double-distilled rum*. It might be easy to rectify the spirit, and bring it to much greater purity than we usually find it to be of: for it brings over in the distillation a very large quantity of the oil; and this is often so disagreeable, that the rum must be suffered to lie by a long time to mellow before it can be used; whereas, if well rectified, it would grow mellow much sooner, and would have a much less potent flavour.

The best state to keep rum in, both for exportation and other uses, is doubtless that of alcohol or rectified spirit. In this manner it would be transported in one half the bulk it usually is, and might be let down to the common proof-strength with water when necessary: for the common use of making punch, it would likewise serve much better in the state of alcohol; as the taste would be cleaner, and the strength might always be regulated to a much greater exactness than in the ordinary way.

The only use to which it would not so well serve in this state, would be the common practice of adulteration among our distillers; for when they want to mix a large portion of cheaper spirit with the rum, their business is to have it of the proof-strength, and as full of the flavouring oil as they can, that it may drown the flavour of the spirits they mix with it, and extend its own. If the business of rectifying rum was more nicely managed, it seems a very practicable scheme to throw out so much of the oil, as to have it in the fine light state of a clear spirit, but lightly impregnated with it: in this case it would very nearly resemble arac, as is

proved by the mixing a very small quantity of it with a tasteless spirit, in which case the whole bears a very near resemblance to arac in flavour.

Rum is usually very much adulterated in Britain; some are so bare-faced as to do it with malt-spirit; but when it is done with molasses spirit, the tastes of both are so nearly allied, that it is not easily discovered. The best method of judging of it is by setting fire to a little of it; and, when it has burnt away all the inflammable part, examining the phlegm both by the taste and smell.

RUM is a considerable island, one of the Hebrides, or rather one continued rock, of nearly 30 miles in circumference. It is the property of Mr Maclean of Coll; contains 300 inhabitants; grazes cattle and sheep; pays 200 l. rent annually: but has neither kelp, freestone, nor lime.

RUMELIA, in geography, the same with ancient Greece; now a part of Turkey in Europe.

RUMEN, the paunch, or first stomach of such animals as chew the cud; thence called *RUMINANT Animals*. See *COMPARATIVE Anatomy*, n° 92, &c.

RUMEX, dock, in botany: A genus of the trigynia order, belonging to the hexandria class of plants; and in the natural method ranking under the 12th order, *Holoracea*. The calyx is triphyllous; there are three connivent petals, and one triquetrous seed. There are 27 species; of which the most remarkable are,

1. The *patientia*, commonly called *patience rhubarb*. This was formerly much more cultivated in the British gardens than at present: the roots of this have been generally used for the monk's rhubarb, and has even been thought to be the true kind; but others suppose the second sort should be used as such. The root is large, and divides into many thick fibres; their outer cover is brown, but they are yellow within, with some reddish veins; the leaves are broad, long, and acute-pointed; their footstalks are of a reddish colour; the stalks rise six or seven feet high, and divide towards the top into several erect branches garnished with a few narrow leaves terminating with loose spikes of large staminous flowers. These appear in June, and are succeeded by pretty large three-cornered seeds, whose coverings are entire, which ripen in autumn.

2. The *alpinus*, or monk's rhubarb, grows naturally on the Alps, but has long been cultivated in the gardens of this country. This hath large roots which spread and multiply by their offsets: they are shorter and thicker than the former, are of a very dark brown on the outside, and yellow within. The leaves are of the round heart-shape, standing upon long footstalks. The stalks rise from two to three feet high; they are thick, and have a few small roundish leaves on the lower part; but the upper part is closely garnished with spikes of white flowers standing erect close to the stalks. These appear in the latter end of May, and are succeeded by large triangular seeds which ripen in August.

3. The *aquaticus*, or water-dock, grows naturally in ponds, ditches, and standing waters, in many parts of Britain. It is supposed to be the *herba Britannica* of the ancients. It hath large roots which strike deep into the loose mud, sending out leaves which are above two feet long. The stalks rise five or six feet high when the plants grow in water, but in dry land seldom more than three: these are garnished with narrow leaves,

Rum
Rumen.

Ruminant leaves among the spikes of flowers to the top. The flowers stand upon slender footstalks, which are reflexed: they are of an herbaceous colour, appear in June, and the seeds ripen in autumn.

Rui. ber.

4. The acutus, or sharp-pointed dock, (the oxylapathum of the shops); but the markets are supplied with roots of the common docks which are indifferently gathered by those who collect them in the fields, where the kind commonly called *butter-dock* (from its leaves being used to wrap up butter) is much more common than this. The roots of this are slender, and run down-right, sending out a few small fibres; the stalks rise about two feet high, garnished at bottom with leaves four inches long, and one and an half broad in the middle. They are rounded at their base, where they are slightly indented, but end in acute points. From the joints of the stalks come out alternately long footstalks, which sustain the spikes of flowers, which grow in small whorls round the stalks, at about an inch distant.

These plants are but seldom cultivated; and so easily multiply by their numerous seeds, that they soon become troublesome weeds where they once get an entrance.

RUMINANT, in natural history, is applied to an animal which chews over again what it has eat before; which is popularly called *chewing the cud*. Peyer, in a treatise *De Ruminantibus et Ruminations*, shows that there are some animals which really ruminate; as oxen, sheep, deer, goats, camels, hares, and squirrels: and that there are others which only appear to do so, as moles, crickets, bees, beetles, crabs, mullets, &c. The latter class, he observes, have their stomachs composed of muscular fibres, by which the food is ground up and down as in those which really ruminate. Mr Ray observes, that ruminants are all four-footed, hairy, and viviparous; some with hollow and perpetual horns, others with deciduous ones.

RUMP OF THE SACRIFICES. Moses had ordained, that the rump and fat of the sheep that were offered for a peace-offering should be put upon the fire of the altar (Lev. iii. 9. vii. 3. viii. 25. ix. 19.). The rump was esteemed the most delicate part of the animal.

RUMPHIA, in botany: A genus of the monogynia order, belonging to the triandria class of plants; and in the natural method ranking with those of which the order is doubtful. The calyx is trifid; the petals three; the fruit a trilocular plum.

RUNDLET, or **RUNLET**, a small vessel, containing an uncertain quantity of any liquor, from 3 to 20 gallons.

RUNGS, in a ship, the same with the floor or ground timbers; being the timbers which constitute her floor; and are bolted to the keel, whose ends are rung-heads.

RUNG-HEADS, in a ship, are made a little bending to direct the sweep or mold of the futtocks and navel-timbers; for here the lines begin which make the compass and bearing of the ship.

RUNIC, a term applied to the language and letters of the ancient Goths, Danes, and other northern nations. See **ALPHABET**.

RUNNER, in the sea-language, a rope belonging to the garnet and the two bolt-tackles. It is reeved in a single block joined to the end of a pendant: it

has at one end a hook to hitch into any thing; and, at the other, a double block, into which is reeved the fall of the tackle, or the garnet, by which means it purchases more than the tackle would without it.

RUNNING-THRUSH, among farriers. See **FARRIER**, sect. xlv.

RUNNET, or **RENNET**, is the concreted milk found in the stomachs of sucking quadrupeds, which as yet have received no other nourishment than their mother's milk. In ruminating animals, which have several stomachs, it is generally found in the last, though sometimes in the next to it. If the runnet is dried in the sun, and then kept close, it may be preserved in perfection for years. Not only the runnet itself, but also the stomach in which it is found, curdles milk without any previous preparation. But the common method is, to take the inner membrane of a calf's stomach, to clean it well, to salt and hang it up in brown paper: when this is used the salt is washed off, then it is macerated in a little water during the night, and in the morning the infusion is poured into the milk to curdle it. But see more particularly the article **CHEESE** for a proper receipt to make runnet, upon which the quality of the cheese greatly depends—The medicinal qualities of runnet are its acrimony, its resolvent power, and its usefulness in surfeits from food of difficult digestion.

RUPEE, a silver coin current in the East Indies, worth about 2 s. 6 d.

RUPERT, or **ROBERT**. See **ROBERT**.

RUPERT, prince palatine of the Rhine, &c. son of Frederic prince elector palatine of the Rhine and Elisabeth daughter to king James I of England, was born in 1619. He gave proofs of his bravery at the age of 13; and in 1642 came over into England, and offered his service to king Charles I. his uncle, who gave him a command in his army. At Edgehill he charged with incredible bravery, and made a great slaughter of the parliamentarians. In 1643 he seized the town of Cirencester; obliged the governor of Litchfield to surrender; and having joined his brother prince Maurice, reduced Bristol in three days, and passed to the relief of Newark. In 1644 he marched to relieve York, where he gave the parliamentarians battle, and entirely defeated their right wing; but Cromwell charged the marquis of Newcastle with such an irresistible force, that prince Rupert was entirely defeated. After this the prince put himself into Bristol, which surrendered to Fairfax after a gallant resistance. The king was so enraged at the loss of this city, so contrary to his expectation, that he recalled all prince Rupert's commissions, and sent him a pass to go out of the kingdom. In 1648 he went to France, was highly complimented by that court, and kindly received by king Charles II. who sojourned there for the time. Afterward he was constituted admiral of the king's navy; infested the Dutch ships, many of which he took; and having engaged with De Ruyter, obliged him to fly. He died in 1682, and was interred in king Henry VII's chapel, Westminster, with great magnificence. Mr Granger observes, that he possessed in a high degree that kind of courage which is better in an attack than a defence; and is less adapted to the land-service than that of the sea, where precipitate valour is in its element. He seldom engaged but he gained the advantage, which

**Running-
Thrush
||
Rupert.**

Rupert
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Rufcus.

he generally lost by pursuing it too far. He was better qualified to storm a citadel, or even to mount a breach, than patiently to sustain a siege; and would have furnished an excellent hand to a general of a cooler head. This prince is celebrated for the invention of prints in mezzotinto, of which he is said to have taken the hint from a soldier's scraping his rusty fusil. The first print of this kind ever published was done by his highness, and may be seen in the first edition of Evelyn's *Sculptura*. The secret is said to have been soon after discovered by Sherwin an engraver, who made use of a loaded file for laying the ground. The prince, upon seeing one of his prints, suspected that his servant had lent him his tool, which was a channeled roller; but upon receiving full satisfaction to the contrary, he made him a present of it. The roller was afterwards laid aside; and an instrument with a crenelled edge, shaped like a shoemaker's cutting-knife, was used instead of it. He also invented a metal called by his name, in which guns were cast; and contrived an excellent method of boring them, for which purpose a water-mill was erected at Hackney-marsh, to the great detriment of the undertaker, as the secret died with the illustrious inventor.

RUPERT'S Drops, a sort of glass-drops with long and slender tails, which burst to pieces on the breaking off those tails in any part; said to have been invented by prince Rupert, and therefore called by his name. Concerning the cause of this surprising phenomenon scarce any thing that bears the least appearance of probability has been offered. Their explosion is attended in the dark with a flash of light; and by being boiled in oil, the drops are deprived of their explosive quality.

RUPIN, or *RAPIN*, a town of Germany, in the marquisate of Brandenburg, and capital of a duchy of the same name. It is divided into the Old and the New. The Old was nothing but an ancient castle, very well furnished, the late king of Prussia, before his father's death, residing there. New Rupin is seated on a lake, and become a considerable place of trade, with a manufactory of cloth. It is also noted for brewers. E. Long. 13. 23. N. Lat. 53. 0.

RUPPIA, in botany: A genus of the tetragynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the 15th order, *Inundata*. There is neither calyx nor corolla; but four pedicellated seeds.

RUSCUS, *KNEE-HOLLY*, or *Butcher's Broom*: A genus of the syngenesia order, belonging to the dioecia class of plants; and in the natural method ranking under the 11th order, *Sarmentaceæ*. The male calyx is hexaphyllous; there is no corolla; the nectarium is central, ovate, and perforated at the top. The female calyx, corolla, and nectarium, are the same as in the male; there is one style, with a trilocular two-seeded berry.

The most remarkable species is the *aculeatus*, or common butcher's broom, common in the woods in many parts of England. It has roots composed of many thick fibres which twine about each other; from which arise several stiff green stalks about three feet high, sending out from their sides several short branches, garnished with stiff, oval, heart-shaped leaves, placed alternately on every part of the stalk, ending with sharp prickly points. The flowers are produced in the middle, on the upper side of the leaves; they are small,

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and cut into six parts; of a purple colour, sitting close to the midrib. They appear in June; and the female flowers are succeeded by berries as large as cherries, of a sweetish taste, which ripen in winter; when they are of a beautiful red colour. As this plant grows wild in most parts of England, it is rarely admitted into gardens; but if some of the roots are planted under tall trees in large plantations, they will spread into large clumps; and as they retain their leaves in winter, at that season they will have a good effect. The seeds of this plant generally lie a year in the ground before they vegetate; and the plants so raised are long before they arrive at a size big enough to make any figure, and therefore it is much better to transplant the roots.—The root of this plant is accounted aperient, and in this intention is sometimes made an ingredient in apozems and diet-drinks, for opening slight obstructions of the viscera and promoting the fluid secretions. This plant is used by the butchers for besoms to sweep their blocks. Hucksters place the boughs round their bacon and cheese to defend them from the mice; for they cannot make their way through the prickly leaves.

RUSH, in botany. See *JUNCUS*.

RUSH-Candles. See *Rush-CANDLES*.

RUSHWORTH (John), the compiler of some useful collections respecting the affairs of state, was born in Northumberland about the year 1607, and was descended of honourable ancestors. After attending the university of Oxford for some time, he removed to Lincoln's Inn; but the study of law not suiting his genius, he soon deserted it, in order to seek a situation where he might more easily gratify his love for political information. He frequented the meetings of parliament, and wrote down the speeches both of the king and members. During the space of 11 years, from 1630 to 1640, when no parliament was held, he was an attentive observer of the great transactions of state in the star-chamber, the court of honour, and exchequer chamber, when all the judges of England assembled there on cases of great emergency. Nor did he neglect to observe with a watchful eye those events which happened at a distance from the capital. He visited the camp at Berwick, was present at the battle of Newborn, at the treaty of Rippon, and at the great council of York.

In 1640 he was appointed assistant to Henry Elsynge clerk to the house of commons, and thus had the best opportunities of being acquainted with their debates and proceedings. The commons considered him as a person worthy of confidence. In particular, they trusted him with carrying their messages to the king while he remained at York. And when the parliament created Sir Thomas Fairfax their general, Rushworth was appointed his secretary, and discharged the office much to the advantage of his master. When Fairfax resigned his commission, his secretary returned to Lincoln's Inn, and was soon after (in 1651-2) chosen one of the committee that was appointed to deliberate concerning the propriety and means of altering or new-modelling the common law. He was elected one of the representatives for Berwick upon Tweed to the parliament which Richard Cromwell assembled in 1658, and was re-elected by the same town to the parliament which restored Charles II. to the crown.

After the Restoration, he delivered to the king several

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Rush,
Rushworth.

Rushworth,
Russelia.

ral books of the privy-council, which he had preserved in his own possession during the commotions which then agitated the country. Sir Orlando Bridgeman keeper of the great seal chose him his secretary in 1677, an office which he enjoyed as long as Sir Orlando kept the seals. In 1678 he was a third time chosen member for Berwick, and a fourth time in the ensuing parliament in 1679. He was also a member of the parliament which was convened at Oxford. The different offices he had held afforded him favourable opportunities of acquiring a fortune, or at least an independence; yet, whether from negligence or prodigality, he was never possessed of wealth. Having run himself into debt, he was arrested and committed to the King's Bench prison, Southwark, where he lingered for the last six years of his life in the most deplorable condition. His memory and judgment were much impaired, partly by age and partly by the too frequent use of spirituous liquors. He died on the 12th of May 1690.

His "Historical Collections of private Passages in State, weighty Matters in Law, remarkable Proceedings in Parliament," were published in folio at different times. The first part, comprehending the years between 1618 and 1629, appeared in 1659. The copy had been entrusted by Oliver Cromwell to Whitelock, with instructions to peruse and examine it. Upon perusing it, he thought it necessary to make some alterations and additions. The second part was published in 1680; the third in 1692; the fourth and last, which comes down to the year 1648, was published in 1701; and altogether made seven volumes. These underwent a second edition in 1721; and the trial of the earl of Strafford was added, which made the eighth. This work has been much applauded by those who condemn the conduct of Charles I. and accused of partiality by those who favour the cause of that unhappy monarch. One person in particular, Dr John Nelson of Cambridge, in a Collection of the Affairs of State published by the command of Charles II. undertook to prove, "that Rushworth has concealed truth, endeavoured to vindicate the prevailing detractions of the late times, as well as their barbarous actions, and with a kind of rebound to libel the government at second-hand." This accusation seems to be carried too far. His principles indeed led him to show the king and his adherents in an unfavourable light, and to vindicate the proceedings of parliament; yet it cannot justly be affirmed that he has misrepresented or falsified any of the speeches or facts which he has admitted into his collection. Perhaps he may have omitted some papers merely because they were unfavourable to the party which he had espoused; and is therefore not to be considered as an impartial historian who relates the whole truth, but as an honest lawyer, who states all his facts fairly and candidly, but passes over such as are injurious to his client's cause.

RUSSELIA, in botany: A genus of the trigynia order, belonging to the pentandria class of plants. The calyx is five-leaved; the petals five above; the capsule is one-celled and many seeded.

RUSSIA, a very large and powerful kingdom, partly in Europe and partly in Asia, is bounded on the north by the Northern Ocean, or Frozen Sea; on the east it is washed by the Eastern Ocean, and is divided from America by Behring's (formerly Anian) Straits, which are about 73 versts (A) wide. From thence, towards the south, it extends along the chain of the Aleoutskie islands, which approach the north-west coast of America; and from Kamtschatka, towards the south-west, it extends, by a chain of other islands, called Kourilskie islands, as far as Japan; on the south it borders on the Black Sea, on the nations which dwell at the foot of the Caucasian mountains, on a part of Persia, the Caspian Sea, the hordes of Kirghiskaisacki, on Ziungoria, Chinese Mongolia and Daouria (B); and on the west, on the Danish and Swedish Lapland, the Baltic Sea, Courland, Livonia, Lithuania, Poland, and Turkey in Europe.

Russia occupies more than a seventh part of the known continent, and nearly the 26th part of the whole globe. Its greatest extent from west to east, viz. from the $39\frac{1}{2}$ to $207\frac{1}{4}$ degree of longitude, is 168 degrees; and if the islands of the Eastern Ocean be included, it will then be 185; so that the continental length of Russia, viz. from Riga to Tchoukotskoy Nofs, which is the easternmost promontory, will constitute about 8500 versts. The greatest extent of this empire from north to south, that is, from the 78th to $50\frac{1}{4}$ degree of latitude, is $27\frac{1}{4}$ degrees. Hence the breadth of Russia, that is, from the Cape Taymour, which is the north-eastern promontory, to Kiakhta, will constitute about 3200 versts.

The greater part of this empire lies in the temperate zone, and a part of it, viz. that which is beyond the $66\frac{1}{2}$ degree of latitude, lies in the frigid zone; and the whole surface contains above 2,150,000 square versts. There therefore is not at present, and never has been in any period, an empire, the extent of which could be compared to that of Russia. The length and breadth of this immense empire, taken in a straight line, may be thus discovered. Its furthestmost point or spot on the north is the Taymour Cape, which is the most north-eastern promontory in the government of Tobolsk, lying in the 78th degree of latitude; its farthest point on the south is the mouth of the river Soulak, falling into the Caspian Sea in the government of Caucasus, lying in the 43d degree of latitude; its westernmost point is the island of Oezel in the government of Riga, in the $39\frac{1}{4}$ degree of longitude; and the furthestmost point of it on the east is the Tchoukotskoy Nofs, which is the most eastern cape in the government of Irkoutsk, lying in the $207\frac{1}{4}$ degree of longitude.

In ancient times Russia was inhabited by various nations; such as Huns, Scythians, Sarmatians, Massagetes, Slavonians, Cimbri, &c. of whom an account is given under the various detached articles in this work. The origin of the Russians themselves, though not prior to the ninth century, is still covered with almost impenetrable obscurity; partly owing to the ignorance and barbarity of the people, and partly to the mistaken

Russia.
I
Situation
and extent.
Plate
CCCCXLIII.

(A) Versta is the usual measure of roads in Russia, 1166 yards and two feet.

(B) Daouria is that extent of land which is traversed by the river Amour. It is so called on account of the Daouri, its ancient inhabitants, who were a race of the Toungoosi or Manjour.



¹ **Russia.** mistaken policy which yet prevails in the nation, of suppressing all accounts of their origin, and inquiries into their ancient state and situation; of which we have a remarkable instance in the suppression of a work by professor Muller, intitled *De Originibus Gentis et Nominis Russorum*.

³ **Origin of the Russians.**

According to several authors of credit, the Russians derived their origin from the Slavi or Slavonians, corruptly called the *Sclavonians*, who settled first along the banks of the Volga, and afterwards near the Danube, in the countries named *Bulgaria* and *Hungary*: but being driven from thence by the Romans (whom the Russians call *Wolochers*, or *Wolotaners*), they first removed to the river Borysthenes, or Dneiper, then over-ran Poland, and, as is reported, built the city of Kiow. Afterwards they extended their colonies farther north, to the rivers which run into the *Ilmen* lake, and laid the foundation of the city of Novogorod. The towns of Smolensk and Tsernikow appear also to have been built by them, though the dates of these events cannot be ascertained. The most ancient inhabitants, not only of Russia, but all over Siberia, quite to the borders of China, are called *Tshudi*: for professor Muller, on inquiring in those parts by whom the ancient buildings and sepulchral monuments he saw there, were erected, was everywhere answered, that they were the works of the *Tshudi*, who in ancient times had lived in that country.

In the ninth century, the Scandinavians, that is, the Danes, Norwegians, and Swedes, emigrated from the north, and, crossing the Baltic, went to seek habitations in Russia. They first subdued the Courlanders, Livonians, and Esthonians; and, extending their conquests still farther, they exacted tribute from the Novogorodians, settled kings over them, and traded as far as Kiow, and even to Greece. These new invaders were called *Waregers*; which, according to professor Muller, signifies "sea-faring people;" or, if derived from the old northern word *war*, it signifies "warlike men." To these Waregers the name of *Russes*, or *Russians*, is thought by the most eminent authors to owe its origin; but the etymology of the word itself is entirely uncertain.

⁴ **Russia at first divided into a number of petty kingdoms.**

In the dark ages of which we are speaking, it is pretty certain that Russia was divided among a great number of petty princes, who made war upon each other with the ferocity and cruelty of wild beasts; so that the whole country was reduced to the utmost misery; when Gostomisel, a chief of the Novogorodians, pitying the unhappy fate of his countrymen, and seeing no other method of remedying their calamities, advised them to offer the government of their country to the Waregers. The proposal was readily accepted, and three princes of great abilities and valour were sent to govern them; namely, Ruric, Sincus, and Truwor, generally supposed to have been brothers. The first took up his residence at Ladoga, in the principality of Great Novogorod; the second at Bielo Osero, or the White Lake; and the third kept his court at Isborsk, or, according to others, at a small town, then called *Twertzog*, in the principality of Pleskow. The three brothers reigned amicably, and made considerable additions to their dominions; all of which at length devolved to Ruric by the death of Sincus and Truwor; but what

the conquests of the two brothers were, we have no records to inform us of.

Ruric, to his honour, became zealous for the strict administration of justice; and issued a command to all the boyars who possessed territories under him, to exercise it in an exact and uniform manner. To this end, it was necessary there should be general laws. And this naturally leads us to conjecture, that letters were not entirely unknown in his dominions.

The Russian empire continued to flourish till the end of the reign of Wolodomir, who ascended the throne in the year 976. Having settled the affairs of his empire in peace, he demanded in marriage the princess Anne, sister to the Greek emperor Basilus Porphyrogenitus. His suit was granted, on condition that he should embrace Christianity. With this the Russian monarch complied; and that vast empire was thenceforward considered as belonging to the patriarchate of Constantinople. Wolodomir received the name of *Basilus* on the day on which he was baptized; and, according to the Russian annals, 20,000 of his subjects were baptized the same day. Michael Syra, or Cyrus, a Greek, sent by Photius the patriarch of Constantinople, was accepted as metropolitan of the whole country. At the same time, Wolodomir put away all his former wives and concubines, of whom he had upwards of 800, and by whom he had 12 sons, who were baptized on the same day with himself. The idols of paganism were now thrown down; churches and monasteries were erected, towns built, and the arts began to flourish. The Sclavonian letters were now first introduced into Russia; and Wolodomir sent missionaries to convert the Bulgarians; but only three or four of their princes came to him and were baptized. These events happened in the year 987.

Wolodomir called the arts from Greece, cultivated them in the peaceable periods of his reign, and rewarded their professors with generosity, that he might dispel the clouds of ignorance which enveloped his country, call forth the genius of his countrymen, and render them happy. He also founded public schools, and enacted a law concerning the methods of instructing youth, and directing the conduct of the masters appointed to instruct them. He died in 1008, and, contrary to all rules of sound policy and prudence, divided his empire among his 12 sons. The consequence was, that they fell to making war and destroying one another as soon as their father was dead. Suantepolk, one of the brothers, having destroyed and seized upon the dominions of two others, was himself driven out by Jarislaus, and obliged to fly to Boleslaus king of Poland. This brought on a dreadful war betwixt the Poles and Russians; in which the former were victorious, and the latter lost a great part of their dominions, as has been related under the article *POLAND*.

Jarislaus finding himself unable to oppose the king of Poland, now turned his arms against the rest of his brothers, all of whom he dispossessed of their dominions, and seized them for himself. He next attacked the Cossacks, over whom he gained several advantages. After which he ventured once more to try his fortune with Boleslaus; but in this second expedition he was attended with worse success than before; being now reduced to the condition of a vassal and tributary to the

4 A 2

victorious

Russia.

⁵ Ruric the first sovereign.

⁶ Christianity introduced.

⁷ Learning and the arts cultivated.

⁸ A civil war.

Russia.
9
Russia be-
comes tri-
butary to
Poland.

victorious monarch. However, in the reign of Mieczslaus II. the successor of Boleslaus, the Russians again shook off the yoke, and a lasting peace was confirmed by the marriage of Mieczslaus with the sister of Wolodomir.

Jarislau now continued to enjoy the empire quietly, and was so much addicted to reading, that he devoted even a part of the night to his studies. He invited men of letters to his court, and caused many Greek books to be translated into the Russian language. It was he that in the year 1019, gave the people of Novogorod several laws, under the title of *Gramota Soudebnaja*, to be observed in the courts of justice. These are the first laws that were reduced to writing in Russia; and, what renders them remarkable, is the conformity they have with those of the other northern nations. He founded a public school at Novogorod, where he maintained and educated 300 children at his own expence. His court was the most brilliant of the north, and furnished an asylum to unfortunate princes. He died in 1052; and fell into the same error which his father had committed, by dividing his dominions among his five sons. This produced a repetition of the bloody scenes which had been acted by the sons of Wolodomir; the Poles took the advantage of the distracted state of affairs to make continual inroads and invasions; and the empire continued in the most deplorable situation till the year 1237, when it was totally

10
Subdued by
the Tartars.

subdued by the Tartars. We are not informed of any particulars of this remarkable event, farther than that innumerable multitudes of these barbarians, headed by their khan Batto, or Battus, after ravaging great part of Poland and Silesia, broke suddenly into Russia, where they committed the greatest cruelties. Most of the Russian princes, among whom was the great duke George Sevoloditz, were made prisoners, and racked to death; and, in short, none found mercy but such as acknowledged themselves the subjects of the Tartars. The imperious conqueror imposed upon the Russians every thing that is most mortifying in slavery; insisting that they should have no other princes than such as he approved of; that they should pay him yearly a tribute, to be brought by the sovereigns themselves on foot, who were to present it humbly to the Tartarian ambassador on horseback. They were also to prostrate themselves before the haughty Tartar; to offer him milk to drink; and, if any drops of it fell down, to lick them up; a singular mark of servility, which continued near 260 years.

11
The empire
harassed
by internal
dissensions,

George Sevoloditz was succeeded by his brother Michael Sevoloditz Zernigouski; who opposed the Tartars, but was defeated by them, and lost his life. He left three sons, Feodor, Alexander, and Andrew, whose wars with each other ended in the death of them all. A son of Alexander, and of the same name, was then placed on the throne by the Tartars; and his son Danilow, or Daniel Alexandrovitz, removed his court from Wolodimir to Moscow, where he first assumed the title of *Great duke of Wolodimir and Moscow*. Daniel Alexandrovitz left two sons, Gregory and John; the former of whom, named *Kalita*, from a purse he used always to carry about him filled with money for the poor, ascended the throne; but he was soon assassinated by another prince named *Demetri Michaelovitz*, who was himself put to death for it by the Tartars; and

John, likewise surnamed *Kalita*, was then made czar. This John left three sons, John, Simon, and Andrew; and the eldest of these, commonly called *Ivan Ivanovitz*, was made czar, with the approbation of the Tartars, on whom he was dependent.

Russia.

During these several reigns, which fill a space of upwards of 100 years, and which all historians have passed over for want of records concerning them, the miseries of a foreign yoke were aggravated by all the calamities of intestine discord and war; whilst the knights of Livonia, or brothers of the short-sword, as they are sometimes called, a kind of military order of religious, on one side, and the Poles on the other, catching at the opportunity, attacked Russia, and took several of its towns, and even some considerable countries. The Tartars and Russians, whose interests were in this case the same, often united to oppose their common enemies; but were generally worsted. The Livonians took Pleskow; and the Poles made themselves masters of Black Russia, the Ukraine, Podolia, and the city of Kiow. Casimir the Great, one of their kings, carried his conquests still farther. He asserted his pretensions to a part of Russia, in right of his relation to Boleslaus duke of Halitz, who died without issue, and forcibly possessed himself of the duchies of Perzemyslia, Halitz, and Luckow, and of the districts of Sanock, Lubackow, and Trebowla; all which countries he made a province of Poland.

12
And by ex-
ternal ene-
mies.

The newly-conquered Russians were ill-disposed to brook the government of the Poles; whose laws and customs were more contrary to their own than those of the Tartars had been. They joined the latter to rid themselves of the yoke; and assembled an army numerous enough to overwhelm all Poland, but destitute of valour and discipline. Casimir, undaunted by this deluge of barbarians, presented himself at the head of a few troops on the borders of the Vistula, and obliged his enemies to retire.

Demetrius Ivanovitz, son of Ivan Ivanovitz, who commanded in Moscow, made frequent efforts to rid himself of the galling yoke. He defeated in several battles Maymay khan of the Tartars; and, when conqueror, refused to pay them any tribute, and assumed the title of *great duke of Muscovy*. But the oppressors of the north returned in greater numbers than before; and Demetrius, at length overpowered, after a struggle of three years, perished with his whole army, which, if we may credit historians, amounted to upwards of 240,000 men.

13
A great ar-
my cut in
pieces by
the Tartars.

Basilus Demetrivitz revenged his father's death. He attacked his enemies, drove them out of his dominions, and conquered Bulgaria. He made an alliance with the Poles, whom he could not subdue; and even ceded to them a part of his country, on condition that they should help him to defend the rest against any new incursions of the Tartars. But this treaty was a weak barrier against ambition. The Russians found new enemies in their allies; and the Tartars soon returned.—Basilus Demetrivitz had a son who was called after his name, and to whom the crown ought naturally to have descended. But the father, suspecting his legitimacy, left it to his own brother Gregory, a man of a severe and tyrannical disposition, and therefore hated by the people, who asserted the son's right, and proclaimed him their sovereign. The Tartars took cognizance of

Russia.

of the dispute, and determined it in favour of Basilus; upon which Gregory had recourse to arms, drove his nephew from Moscow to the principality of Uglitz, and forcibly usurped and kept possession of his throne. Upon the death of Gregory, Basilus returned to Moscow; but Andrew and Demetrius, sons of the late usurper, laid siege to that city, and obliged him to retire to the monastery of Troitz, where they took him prisoner, with his wife and son, and put out his eyes: hence the appellation of *jemnoi*, "blind," by which this Basilus is distinguished. The subjects of this unfortunate prince, incensed at the cruel treatment he had received, forced the perpetrators of it to fly to Novogorod, and reinstated their lawful sovereign at Moscow, where he died.

14
John Basilovitz I. retrieves the affairs of Russia.

In the midst of this general confusion, John Basilovitz I. by his invincible spirit and refined policy, became both the conqueror and deliverer of his country, and laid the first foundation of its future grandeur. Observing with indignation the narrow limits of his power at his accession to the throne, after the death of his father Basilus the Blind, he began immediately to revolve within himself the means of enlarging his dominions. Marriage, though he had in reality no regard or inclination for women, seemed to him one of the best expedients he could begin with; and accordingly he demanded and obtained Maria, sister of Michael duke of Twer; whom he soon after deposed, under pretence of revenging the injuries done to his father, and added this duchy to his own territories of Moscow. Maria, by whom he had a son named *John*, who died before him, did not live long; and upon her death he married Sophia, daughter of Thomas Paleologus, who had been driven from Constantinople, and forced to take shelter at Rome, where the pope portioned this princess, in hopes of procuring thereby great advantage to the Romish religion; but his expectations were frustrated, Sophia being obliged to conform to the Greek church after her arrival in Russia. What could induce Basilovitz to seek a consort at such a distance, is nowhere accounted for; unless it be, that he hoped by this means to establish a pretension to the empire of the east, to which her father was the next heir: but however that may be, the Russians certainly owed to this alliance their deliverance from the Tartar yoke. Shocked at the servile homage exacted by those proud victors, her husband going to meet their ambassadors at some distance from the city, and standing to hear what they had to say; whilst they were at dinner, Sophia told him, that she was surprised to find that she had married a servant to the Tartars. Nettled at this reproach, Basilovitz feigned himself ill when the next deputation from the Tartars arrived, and under that pretence avoided a repetition of the stipulated humiliating ceremonial. Another circumstance equally displeasing to this princess was, that the Tartars had, by agreement, within the walls of the palace at Moscow, houses in which their ministers resided; to show their power, and at the same time watch the actions of the great duke. To get rid of these, a formal embassy was sent to the Tartarian khan, to tell him, that Sophia having been favoured with a vision from above, ordering her to build a temple in the place where those houses stood, her mind could not be at ease till she had fulfilled the divine command; and therefore his leave

was desired to pull them down, and give his people others. The khan consented: the houses within the Kremlin were demolished; and no new ones being provided, the Tartar residents were obliged to leave Moscow; their prince not being able to revenge this breach of promise, by reason of a war he was then engaged in with the Poles. Basilovitz taking advantage of this circumstance, and having in the mean time considerably increased his forces, openly disclaimed all subjection to the Tartars, attacked their dominions, and made himself master of Casan, where he was solemnly crowned with the diadem of that kingdom, which is said to be the same that is now used for the coronation of the Russian sovereigns. The province of Permia, with great part of Lapland and Asiatic Bulgaria, soon submitted to him; and Great Novogorod, a city then so famous that the Russians used to express its vast importance by the proverbial expression of, *Who can resist God and the Great Novogorod?* was reduced by his generals after a seven years siege, and yielded him an immense treasure; no less, say some writers, than 300 cart loads of gold and silver, and other valuable effects. Alexander Witold, waiwode of Lithuania, was in possession of this rich place, from which he had exacted for some years an annual tribute of 100,000 rubles, a prodigious sum for those days and for that country. When it was taken by John Basilovitz, he, the better to secure his conquest, put it under the protection of the Poles, voluntarily rendered himself their tributary for it, and accepted a governor from the hand of their king Casimir, a weak and indolent prince, from whom he well knew he had nothing to fear. The Novogorodians continued to enjoy all their privileges till about two years after; when John, ambitious of reigning without controul, entered their city with a numerous retinue, under pretence of keeping to the Greek faith, he being accused of an intention to embrace the Romish religion; and with the assistance of the archbishop Theophilus, stripped them all of their remaining riches. He then deposed the treacherous prelate, and established over Novogorod new magistrates, creatures of his own; destroying at once, by this means, a noble city, which, had its liberties been protected, and its trade encouraged, might have proved to him an inexhaustible fund of wealth. All the north beheld with terror and astonishment the rapid increase of the victor's power: foreign nations courted his alliance; and the several petty princes of Russia submitted to him without resistance, acknowledging themselves his vassals.

The Poles, however, complained loudly of his late breach of faith in regard to Novogorod, and threatened revenge: upon which Basilovitz, elated with his successes, with the riches he had amassed, and with the weak condition of most of his neighbours, sent a body of troops into Lithuania, and soon became master of several of its towns. Casimir applied for assistance to Matthias king of Hungary: but was answered by this last, that his own soldiers were quite undisciplined; that his auxiliaries had lately mutinied for want of pay; and that it was impossible for him to raise a new army out of the neighbouring countries. The Polish monarch in this distress was obliged to purchase of John a cessation of arms for two years, during which the Muscovite made new accessions to his dominions.

The dukes of Servia, whose territories were about

Russia.

17
His success.

15
Marries a Greek princess,

16
Who excites him to shake off the Tartar yoke.

18
Invades Lithuania and obliges the Poles to sue for peace.

¹⁹ **Russia.** 500 miles in extent, had long thought themselves ill used by the Lithuanians on account of their religion, which was that of the Greek church; and wanted to withdraw from their subjection to Poland, and put themselves under the protection of Russia. The following accident afforded them the wished-for pretence. Their envoys arriving at Wilna, desired admittance to the king's presence: which being refused, one of them endeavoured to force his way in; but the porter shut the door rudely against him, and in so doing broke one of his fingers. The servant was immediately put to death for this offence: but the Servians, by no means satisfied with that, returned home in great fury, and prevailed upon their countrymen to submit themselves and their country to the Muscovites. Casimir made several attempts to recall them, but to no purpose.

¹⁹ **Servia** submits to him.

Matthias king of Hungary dying about this time, two of his sons, Uladislavus, then king of Bohemia, and John Albert, contended for the vacant crown. Casimir wanted to give it to the latter, whom he accordingly assisted to the utmost of his power; and to enable him the better so to do, though he was in great want of money as well as men, he purchased a renewal of the truce with the Russians, and thereby gave John Basilovitz time to establish himself in his new acquisitions.

²⁰ **Casimir** died in the year 1492, and was succeeded on the throne of Poland by his son John Albert, who, totally disregarding the Russians, involved himself unnecessarily in a war with the brave Stephen duke of Moldavia: and though he had at the same time both the Tartars and Turks against him, his propensity to pleasure, and his lascivious disposition, rendered him so indolent, that he not only did not so much as attempt to molest Basilovitz in any of his possessions, but concluded a peace with him on terms very advantageous to the latter; and even entered into a treaty, by which he stipulated not to assist the Lithuanians, though they had chosen his brother Alexander for their duke, in case the Russians should attack them, as it was supposed they would. Alexander thinking to parry the inconveniences of this agreement, and to guard against the designs of his enemies, demanded in marriage Basilovitz's daughter, Helena, by his second wife Sophia, and obtained her. The Lithuanians then flattered themselves with a prospect of tranquillity: but the ambitious *czar*, for Basilovitz had assumed that title since his conquest of Casan, aiming only at the increase of dominion, soon found a pretence to break with his new allies, by alleging, that Polish Russia, as far as the river Berezina, had formerly belonged to his ancestors, and therefore should be his; and that Alexander, by his marriage-contract, had engaged to build a Greek church at Wilna for his Russian consort, which he had not done, but on the contrary endeavoured to force the Polish Russians to embrace the religion of the church of Rome. In consequence of this plea, he sent into the territories of his son-in-law, by different ways, three armies, which reduced several places, destroyed the country about Smolensko, and defeated the Lithuanian field-marshal Ostrosky near the river Wedrasch, where he fell unawares into an ambush of the Russians. Alexander raised a new army of Silesians, Bohemians, and Moravians; but they came too late, the Russians having retired with their plunder. Elated by their

²¹ **His** succeeds in Lithuania.

success against the Lithuanians, they invaded Livonia in the year 1502, with 130,000 men: but Walter Von Plettenberg, grand-master of the knights of the cross, with only 12,000 men, gave them a total overthrow; killing 10,000 of his enemies, with scarce any loss on his own side. Basilovitz dispirited by this defeat, and being then engaged in a war with the Tartars, the Poles, and the city of Pleskow, immediately dispatched an embassy to Plettenberg, and concluded a truce with him for 50 years. At the same time he begged of that general to send to Moscow, that he might see him, one of the *iron-dragoons*, as he called them, who had performed wonders in the late engagement. Von Plettenberg readily complied; and the czar, struck with admiration, rewarded the cuirassier's accomplishments with considerable honours and presents.

²² **Russia.** Is defeated in Livonia and obliged to retire.

Alexander had been elected king of Poland upon the death of his brother John Albert, which happened in the beginning of this year: but the Poles refused to crown his consort Helena, because she adhered to the Greek religion. Provoked at this affront, and probably still more stimulated by ambition, Basilovitz resolved again to try his fortune with them; and accordingly ordered his son Demetrius, now the eldest, to march against Smolensko, and reduce that city. The young prince did all that could be done: but the vigorous resistance of the besieged, and the arrival of the king of Poland with a numerous army, obliged the Russians to raise the siege and return home; and the czar was glad to make a fresh truce with the Poles for six years, upon the easy terms of only returning the prisoners he had taken. Some writers say, that flying into a violent passion with his son the moment he saw him, and imputing the miscarriage of this expedition to his want of courage or conduct, he gave him a blow which laid him dead at his feet; to which is added, that remorse for this rash action carried his father to his grave: but this account is not confirmed by authors whose authority can be relied on. Certain it is, however, that neither of them long survived this event; and that Demetrius died first: for Sophia, who had gained an absolute ascendant over her husband, and wanted to give the sovereignty to her own children, persuaded him by various artful insinuations to set aside and imprison his grandson Demetrius, the only child of the late John, whom he had by his first wife Maria, and declare her then eldest son, Gabriel, his successor. Age and infirmities had rendered the czar so weak, that he blindly followed the iniquitous advice; but shortly after finding his end approach, he sent for young Demetrius, expressed great repentance for his barbarity towards him, and on his death-bed declared him his lawful successor. He died in November 1505, after a reign of 55 years; leaving behind him an immense territory, chiefly of his own acquiring.

²³ **He** dies and is succeeded by his son who takes the name of Basilus.

The czar was no sooner dead, than his son Gabriel Ivanovitz, at the instigation of his mother Sophia, put an end to the life of the young Demetrius, by confining him in prison, where he perished with hunger and cold; after which Gabriel was crowned by the name of *Basilus*, and took the title of *czar*, as well as all the other titles belonging to the sovereignty. On his accession to the throne he expected that the Poles would be in confusion about the election of a new sovereign; but his expectations being defeated by their unanimous election

Russia.
24
He takes
Pleskow
and Smo-
lensko.

election of Sigismund I. a prince of a mild and peaceable disposition, he sent an army into Lithuania, and laid siege to Smolensko. The place made a brave resistance, till news arrived that the crown-troops of Poland were coming to their assistance, with the additional aid of 80,000 Crim Tartars; on which the Russians returned home with the utmost precipitation. They were, however, quickly followed by the Poles, who reduced the czar to submit to such terms as they pleased to impose. Basilus remained quiet till he thought himself capable of revenging the injuries he had sustained; after which, pretending to set out upon some other expedition, he marched with a numerous army, and encamped in the neighbourhood of Pleskow, where the Poles, presuming on the late treaty, received him as a friend and ally. But in the mean time the Muscovite priests of the Greek church preached to their hearers concerning the expediency of having a sovereign of their own religion; and brought them to such a height of enthusiasm, that they murdered their magistrates, and opened their gates to the czar, who made them all slaves, and sent them away to different parts, replacing them with Muscovites, the better to secure his conquest. Soon after he took also the city of Smolensko; and the Swedes, alarmed at his rapid progress, desired a prolongation of the truce, at that time subsisting between the two states, for 60 years longer. The duchy of Lithuania was the great object of the designs of Basilus; and to accomplish his design, he ordered Ivan Czeladin, a man of great resolution, and enterprising even to rashness, to march thither with 80,000 men. The army of the Poles did not exceed 35,000 men, but was commanded by a most experienced general. The two armies met on the opposite banks of the Dneiper, near Orsova, and the Poles passed that river in sight of their enemies. Czeladin's officers advised him to fall upon the enemy when about half of them had crossed the river; but that general, too confident of success, replied, that the other half would then run away, and he was determined to gain a complete victory. The Lithuanians began the attack, but were repulsed by the Russians; who imprudently following them, lost an advantageous situation, and found themselves at once exposed to the full fire of the enemy's artillery. The Polish cavalry then rushed in among them sword in hand, and made dreadful havoc; the trembling Russians scarce even attempting to defend themselves. Those who endeavoured to fly, fell into the Dneiper and were drowned; and all the rest, including Czeladin himself, were made slaves.

26
Distress of
Basilus.

Basilus was at Smolensko when he received the news of this dreadful defeat; on which he immediately fled to Moscow, where his danger increased daily. The Crim-Tartars ravaged his dominions, and the emperor Maximilian, with whom he had been in alliance, deserted him; his troops were utterly defeated in Livonia, where he was obliged to submit to a peace on dishonourable terms; but what these terms were historians do not inform us. In the mean time, the king of Poland stirred up the Tartars to invade Russia, while the Russian monarch in his turn endeavoured to excite them to an invasion of Poland. These barbarians, equally treacherous to both parties, first invaded and ravaged Podolia, a province of Poland; and

then having invaded Russia and defeated the armies of the czar in the year 1521, they poured in thither in such incredible multitudes, that they quickly made themselves masters of Moscow. An army, which had been sent to oppose their progress, was defeated near the river Occa; and the czar's brother Andrew, who commanded it, was the very first who fled. Basilus with great difficulty made his way to Novogorod; so terrified, that he hid himself by the way under a haystack, to avoid a straggling party of the enemy. The Tartars, however, soon obliged him to sign a writing, by which he acknowledged himself their vassal, and promised to pay them a tribute of so much a head for every one of his subjects. Besides this, Machmetgerei, the commander of the Tartars, caused his own statue to be set up at Moscow, as a mark of his sovereignty; compelled Basilus to return to his capital, to bring thither in person the first payment of this tribute, and, as a token of his submission, to prostrate himself before his statue. Machmetgerei then left Moscow, and returned home with an immense booty, and upwards of 80,000 prisoners, who were made slaves, and sold like cattle to the Turks and other enemies of the Christian name. In his way back he attempted to take the city of Rezan; but was repulsed with considerable loss by Iwan Kowen, who commanded in that place for the Russians. Here the Tartar general narrowly escaped with his life, his coat being shot through with a musket-ball; and the Muscovites pulled down his statue, and broke it to pieces as soon as the conquerors had left them.

Russia.
27
Moscow
taken by
the Tar-
tars.

The Tartars were no sooner gone, than Basilus began to talk in a high strain of the revenge he intended to take of them; but was never able to execute his threats. He died in 1533; and was succeeded by his son Ivan or John Basilovitz, an infant of five years of age.

28
Basilus dies
and is suc-
ceeded by
his son

During the minority of the young prince, his two uncles Andrew and George endeavoured to deprive him of the crown; but their attempts were defeated by the care and activity of his guardians; and the Poles also immediately commenced hostilities, but could make little progress. The new czar, as soon as he entered the 19th year of his age, showed an inclination for rescuing his subjects out of that desperate state of ignorance and barbarism in which they had been hitherto immersed. He sent a splendid embassy to the emperor Charles V. who was then at Augsborg, to desire the renewal of the treaty of friendship which had been concluded with his father Maximilian; and offering to enter into a league with him against the Turks, as enemies to the Christian religion; for his farther information in which, particularly in regard to the doctrine and ceremonies of the Latin church, he requested that his ambassador might be allowed to send from Germany to Russia proper priests to instruct him and his subjects. With these he likewise desired to have some wise and experienced statesmen, able to civilize the wild people under his government; and also, the better to help to polish them, he requested that he would send mechanics and artists of every kind; in return for all which he offered to furnish two tons of gold yearly, for 20 years together, to be employed in the war against the Turks. The emperor readily agreed to the desire of the czar; and the Russian ambassador accordingly en-
gaged.

John Basi-
lovitz II.

29
His embas-
sy to
Charles V.

Russia.

tempting to set himself above the grand-master even in civil affairs, and to persecute those who adhered to the confession of Augsburg, chose for his coadjutor in the archbishopric of Riga Christopher duke of Mecklenburg. From the abilities and haughty temper of this lord, the Livonian knights apprehended that they had reason to fear the same fate which had befallen the Teutonic order in Prussia; and the step itself was, besides, unprecedented, and contrary to the established laws of the country. These discontents were heightened by letters said to be intercepted from the archbishop to his brother Albert duke of Prussia, inviting this last totally to suppress the order of Livonian knights, and to secularize their possessions, especially in Finland; so that an open war broke out among the contending parties, and the archbishop was seized and made prisoner. He was, however, soon released through the mediation of the emperor of Germany and other potentates, backed by the powerful preparations of the Prussians to avenge his cause; but in the mean time, the strength of their country being totally exhausted, the Livonians were obliged, instead of preparing for war, to sue to the Czar for peace. Basilovitz replied, that he did not believe their intentions to be sincere while they kept 6000 Germans in pay; and therefore, if they meant to treat of peace, they must begin with dismissing these troops. The Livonians, having no longer any power to resist, did as they were ordered; but it availed them nothing. In 1558 an army of 100,000 Russians entered the district of Dorpt, and laid every thing waste before them with the most shocking cruelty. After this they entered the territories of Riga, where they behaved with equal inhumanity; and having at last fatiated themselves with blood and treasure, they retired with an immense booty and a great number of prisoners.

38
Livonia ravaged by the Russians.

39
The Livonians sue for peace, but the treaty is broken off.

The Livonians, now thoroughly convinced of their own folly in exposing themselves to the resentment of the exasperated Russians, sent ambassadors to sue for peace in good earnest. These offered the Czar a present of 30,000 ducats, and prevailed upon him to grant their nation a truce for four months, during which they returned home to get the money. But in this interval the Livonian governor of the city of Nerva, out of an idle frolic, fired some cannon against Ivanogorod or Russian Nerva, situated on the opposite side of the river, and killed several of the Czar's subjects who were assembled in an open place quite unarmed. The Russians, out of regard to the truce, did not even attempt to make reprisals; but immediately acquainted Basilovitz with what had happened: which so incensed the Czar, that when the Livonian ambassadors arrived, he told them, he looked upon their nation to be a set of perjured wretches, who had renounced all honesty; that they might go back with their money and proposals, and let their countrymen know that his vengeance would soon overtake them.

40
Livonia ravaged a second time.

The ambassadors were scarce arrived in Livonia, when an army of 300,000 Russians entered the district of Nerva, under the command of Peter Sifegaledrii, who had been a famous pirate in the Euxine sea. He took the city of Nerva in nine days, and very speedily made himself master of Dorpt, where he found immense treasures. Several other garrisons, terrified by the approach of such numbers, quitted their posts; so that the Russians became masters of a great part of Livonia almost without

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opposition. At last, Gothard Kettler, grand-master of the knights of Livonia, intreated Christian III. king of Denmark to take Riga, Revel, and the countries of Garmland, Wirrland, and Esthonia, under his protection; but the advanced age of that monarch, the distance of the places, and the want of sufficient power to withstand so potent an adversary, made him decline the offer. However, he assisted them with some money and powder, of which they stood greatly in need. Having then applied, without success, first to the emperor of Germany, and then to the court of Sweden, Kettler put himself under the protection of the Poles, who had hitherto been such formidable enemies to the Russians. In the mean time the latter pursued their conquests; they took the city of Marienburg, laid waste the district of Riga, destroyed Garmland, and penetrated to the very gates of Revel. Felin, in which was the best artillery of the whole country, became theirs by the treachery of its garrison; and here William of Furstenberg the old grand-master was taken, and ended his days in a prison at Moscow. The distracted situation of the Livonian affairs now induced the bishop of Oesel to sell his bishopric to Ferdinand king of Denmark, who exchanged it with his brother Magnus for a part of Holstein. The districts of Reval and Esthonia put themselves under the protection of Sweden; and then the grand-master, finding himself deserted on all sides, suppressed the order of which he was the chief, and accepted of the duchy of Courland, which he held as a fief of the crown of Poland.

Russia.

41
The order of Livonian knights suppressed.

The Czar saw with pleasure the division of Livonia between the Swedes and Poles, which, he rightly judged, would produce quarrels between the two nations, and thus give him the fairer opportunity of seizing the whole to himself. Accordingly, in 1564, the Swedes offered him their assistance against the Poles; but he, judging himself to be sufficiently strong without them, attacked the Poles with his own forces, and was twice defeated, which checked his farther operations in Livonia. In 1569 he entered into a treaty of commerce with England, captain Richard Chancellor having a short time before discovered a passage to Archangel in Russia through the White Sea, by which that empire was likely to be supplied with foreign goods, without the assistance either of Poland or Livonia. To the discoverers of this new passage Basilovitz granted many exclusive privileges; and after the death of queen Mary renewed the alliance with queen Elizabeth, and which has been continued without interruption ever since.

42
A treaty between Russia and England.

In the mean time, however, a prodigious army of Turks and Tartars entered Muscovy, with a design to subdue the whole country. But Zerebrinov, the Czar's general, having attacked them in a defile, put them to flight with considerable slaughter. Then they retired towards the mouth of the Volga, where they expected a considerable reinforcement; but being closely pursued by the Russians and Tartars in alliance with them, they were again defeated and forced to fly towards Azov on the Black Sea. But when they came there, they found the city almost entirely ruined by the blowing up of a powder magazine. The Russians then attacked their ships there, took some, and sunk the rest; by which means almost the whole army perished with hunger or the sword of the enemy.

43
An army of Turks and Tartars cut off.

From this time the empire of Russia became so formidable

Russia.

midable, that none of the neighbouring nations could hope to make a total conquest of it. The Poles and Swedes indeed continued to be very formidable enemies; and, by the instigation of the former, the Crim Tartars, in 1571, again invaded the country with an army of 70,000 men. The Russians, who might have prevented their passing the Volga, retired before them till they came within 18 miles of the city of Moscow, where they were totally defeated. The Czar no sooner heard this news than he retired with his most valuable effects to a well-fortified cloyster; upon which the Tartars entered the city, plundered it, and set fire to several churches. A violent storm which happened at the same time soon spread the flames all over the city; which was entirely reduced to ashes in six hours, though its circumference was upwards of 40 miles. The fire likewise communicated itself to a powder-magazine at some distance from the city; by which accident upwards of 50 rods of the city wall, with all the buildings upon it, were destroyed; and, according to the best historians, upwards of 120,000 citizens were burnt or buried in the ruins, besides women, children, and foreigners. The castle, however, which was strongly fortified, could not be taken; and the Tartars hearing that a formidable army was coming against them under the command of Magnus duke of Holstein, whom Basilovitz had made king of Livonia, thought proper to retire. The war, nevertheless, continued with the Poles and Swedes; and the Czar being defeated by the latter after some trifling success, was reduced to the necessity of suing for peace.

44
Moscow taken and burnt by the Tartars.

45
War with Sweden and Poland.

But the negotiations being somehow or other broken off, the war was renewed with the greatest vigour. The Livonians, Poles, and Swedes, having united in a league together against the Russians, gained great advantages over them; and, in 1579, Stephen Battori, who was then raised to the throne of Poland, levied an army expressly with a design of invading Russia, and of regaining all that Poland had formerly claimed, which indeed was little less than the whole empire. As the Poles understood the art of war much better than the Russians, Basilovitz found his undisciplined multitudes unable to cope with the regular forces of his enemies: and their conquests were so rapid, that he was soon obliged to sue for peace: which, however, was not granted; and it is possible that the number of enemies which now attacked Russia might have overcome the empire entirely, had not the allies grown jealous of each other; the consequence of which was, that in 1582 a peace was concluded with the Poles, in which the Swedes were not comprehended. However, the Swedes finding themselves unable to effect any thing of moment after the desertion of their allies, were fain to conclude a truce; shortly after which the Czar, having been worsted in an engagement with the Tartars, died in the year 1584.

46
Death of Basilovitz.

This great prince was succeeded by his son Theodore Ivanovitz; a man of such weak understanding, that he was totally unfit for government. Under him, therefore, the Russian affairs fell into confusion; and Boris Gudenov, a nobleman whose sister Theodore had married, found means to assume all the authority. At last, unable to bear even the name of a superior, he resolved to usurp the throne. For this purpose he caused the Czar's brother Demetrius, at that time only nine years of age, to be assassinated; and afterwards, knowing that no trust could be put in an assassin, he

caused him also to be murdered lest he should divulge the secret. In 1597 the Czar himself was taken ill and died, not without great suspicion of his being poisoned by Gudenov; of which indeed the Czarina was so well convinced, that she would never afterwards speak to her brother.

Russia.

With Theodore ended the line of Ruric, who had governed the empire of Russia for upwards of 700 years. Boris, who in reality was possessed of all the power, and would indeed have suffered nobody else to reign, artfully pretended to be unwilling to accept the crown, till compelled to it by the intreaties of the people; and even then he put the acceptance of it on the issue of an expedition which he was about to undertake against the Tartars. The truth of the matter, however, was, that no Tartar army was in the field, nor had Boris any intention of invading that country; but by this pretence he assembled an army of 500,000 men, which he thought the most effectual method of securing himself in his new dignity. In 1600 he concluded a peace with the Poles, but resolved to continue the war against the Swedes; however, being disappointed in some of his attempts against that nation, he entered into an alliance with the Swedish monarch, and even proposed a match between the king's brother and his daughter. But while these things were in agitation, the city of Moscow was desolated by one of the most dreadful famines recorded in history. Thousands of people lay dead in the streets and highways, with their mouths full of hay, straw, or even the most filthy things which they had been attempting to eat. In many houses the fattest person was killed in order to serve for food to the rest. Parents were said to have eaten their children, and children their parents, or to have sold them to buy bread. One author (Petrius) says, that he himself saw a woman bite several pieces out of a child's arm as she was carrying it along; and captain Margaret relates, that four women having ordered a peasant to come to one of their houses, under pretence of paying him for some wood, killed and eat up both him and his horse. This dreadful calamity lasted three years, notwithstanding all the means which Boris could use to alleviate it; and in this time upwards of 500,000 people perished in the city.

47
Extinction of the line of Ruric.

48
Dreadful famine at Moscow.

In 1604 a young man appeared, who pretended to be Demetrius, whom Boris had caused to be murdered, as we have already seen. Being supported by the Poles, he proved very troublesome to Boris all his lifetime; and after his death deprived Theodore Borissovitz, the new Czar, of the empire; after which he ascended the throne himself, and married a Polish princess. However, he held the empire but a short time, being killed in an insurrection of his subjects; and the unhappy Czarina was sent prisoner to Jaroslaw.

After the death of Demetrius, Zuski, who had conspired against him, was chosen Czar; but rebellions continually taking place, and the empire being perpetually harassed by the Poles and Swedes, in 1610 Zuski was deposed, and Uladislaus son of Sigismund king of Poland was elected. However, the Poles representing to Sigismund, that it would be more glorious for him to be the conqueror of Russia, than only the father of its sovereign, he carried on the war with such fury, that the Russians in despair fell upon the Poles, who resided in great numbers at Moscow. The Poles being well

49
Uladislaus the king of Poland's son elected Czar.

armed.

⁵⁰ **Russia.** armed and mostly soldiers, had greatly the advantage; however, they were on the point of being oppressed by numbers, when they fell upon the most cruel method of ensuring their success that could be devised. This was by setting fire to the city in several places; and while the distressed Russians ran to save their families, the Poles fell upon them sword in hand. In this confusion upwards of 100,000 people perished; but the event was, that the Poles were finally driven out, and lost all footing in Russia.

The expulsion of the Poles was succeeded by the election of Theodorovitz Romanov, a young nobleman of 17 years of age, whose posterity, till the accession of the present Empress, continued to enjoy the sovereignty. He died in 1646, and was succeeded by his son Alexis; whose reign was a continued scene of tumult and confusion, being harassed on all sides by external enemies, and having his empire perpetually disturbed by internal commotions.

⁵¹ **Selection of the laws of Russia made by Alexis.** The sources of these commotions were found in the multiplicity and inconsistency of the laws at that period, and in the jarring claims of the nobles on the borders. An *emanny ukase*, or personal order, which is an edict of the sovereign, signed with his own hand, is the only law of Russia. These edicts are as various as the opinions, prejudices, passions, or whims of men; and in the days of Alexis they produced endless contentions. To remedy this evil, he made a selection, from all the edicts of his predecessors, of such as had been familiarly current for a hundred years; presuming that those either were founded in natural justice, or deriving so long a currency had formed the minds of the people to consider them as just. This digest, which he declared to be the common law of Russia, and which is prefaced by a sort of institute, is the standard law-book at this day known by the title of the *Ulogeniè* or *Selection*; and all edicts prior to it were declared to be obsolete. He soon made his *novella*, however, more bulky than the *Ulogeniè*; and the additions by his successors are beyond enumeration. This was undoubtedly a great and useful work; but Alexis performed another still greater.

⁵² **State of courts of judicature, and power of old families.** Though there are many courts of judicature in this widely extended empire, the emperor has always been lord paramount, and could take a cause from any court immediately before himself. But as several of the old nobles had the remains of principalities in their families, and held their own courts, the sovereign or his ministers, at a distance up the country, frequently found it difficult to bring a culprit out of one of these hereditary feudal jurisdictions, and try him by the laws of the empire. This was a very disagreeable limitation of imperial power; and the more so, that some families claimed even a right to repledge. A lucky opportunity offered of settling this dispute; and Alexis embraced it with great ability.

⁵³ **Address of Alexis in getting rid of this last evil.** Some families on the old frontiers were taxed with their defence, for which they were obliged to keep regiments on foot; and as they were but scantily indemnified by the state, it sometimes required the exertion of authority to make them keep up their levies. When the frontiers, by the conquest of Casan, were far extended, those gentlemen found the regiments no longer burdensome, because by the help of false musters, the former scanty allowance much more than reimbursed them for the expence of the establishment. The conse-

quence was, that disputes arose among them about the right of guarding certain districts, and law-suits were necessary to settle their respective claims. These were tedious and intricate. One claimant showed the order of the court, issued a century or two back, to his ancestor for the marching of his men, as a proof that the right was then in his family. His opponent proved, that his ancestors had been the real lords of the marches; but that, on account of their negligence, the court had issued an *emanny ukase* to the other, only at that particular period. The emperor ordered all the family archives to be brought to Moscow, and all documents on both sides to be collected. A time was set for the examination; a fine wooden court-house was built; every paper was lodged under a good guard; the day was appointed when the court should be opened and the claims heard; but that morning the house, with all its contents, was in two hours consumed by fire. The emperor then said, "Gentlemen, henceforward your ranks, your privileges, and your courts, are the nation's, and the nation will guard itself. Your archives are unfortunately lost, but those of the nation remain. I am the keeper, and it is my duty to administer justice for all and to all. Your ranks are not private, but national; attached to the services you are actually performing. Henceforward Colonel Buturlin (a private gentleman) ranks before Captain Viazemsky (an old prince)."

This constitution, which established the different ranks of Russia as they remain to this day, is by Voltaire ascribed to Peter: but it was the work of Alexis; who, when the situation of himself and his country is considered, must be allowed to have been a great and a good man. He died in 1676, and was succeeded by his son Theodore Alexiovitz; who after an excellent reign, during the whole of which he exerted himself to the utmost for the good of his subjects, died in 1682, having appointed his brother Peter I. commonly called *Peter the Great*, his successor. See ⁵⁴ **constitution with respect to ranks still remains in Russia.**

⁵⁵ **Accession of Peter the Great.** Theodore had another brother named John; but as he was subject to the falling-sickness, the Czar had preferred Peter, though very young, to the succession. But through the intrigues of the princess Sophia, sister to Theodore, a strong party was formed in favour of John; and soon after both John and Peter were proclaimed sovereigns of Russia under the administration of Sophia herself, who was declared regent. However, this administration did not continue long; for the princess regent having conspired against Peter, and having the misfortune to be discovered, was confined for life in a convent. From this time also John continued to be only a nominal sovereign till his death, which happened in 1696, Peter continuing to engross all the power.

It is to this emperor that Russia is universally allowed to owe the whole of her present greatness. The private character of Peter himself seems to have been enter, but very indifferent. Though he had been married in his eighteenth year to a young and beautiful princess, he was not sufficiently restrained by the solemn ties of wedlock; and he was besides so much addicted to feasting and drunkenness, the prevailing vice of his country, that nobody could have imagined him capable of effecting the reformation upon his subjects which he actually accomplished. In spite of all disadvantages, however,

Russia.

he applied himself to the military art and to civil government. He had also a very singular natural defect, which, had it not been conquered, would have rendered him for ever incapable of accomplishing what he afterwards did. This was a vehement dread of water; which is thus accounted for. When he was about five years of age, his mother went with him in a coach, in the spring-season; and passing over a dam where there was a considerable water-fall, whilst he lay asleep in her lap, he was so suddenly awaked and frightened by the rushing of the water, that it brought a fever upon him; and after his recovery he retained such a dread of that element, that he could not bear to see any standing water, much less to hear a running stream. This aversion, however, he conquered by jumping into water; and afterwards became very fond of that element.

57
He removes the defects of his education;

Being ashamed of the ignorance in which he had been brought up, he learned almost of himself, and without a master, enough of the High and Low Dutch languages to speak and write intelligibly in both. He looked upon the Germans and Hollanders as the most civilized nations; because the former had already erected some of those arts and manufactures in Moscow, which he was desirous of spreading throughout his empire; and the latter excelled in the art of navigation, which he considered as more necessary than any other. During the administration of the princess Sophia, he had formed a design of establishing a maritime power in Russia; which he accomplished by the means which we have recorded in his life.

58
And is successful in an expedition against the Turks.

Having reformed his army, and introduced new discipline among them, he led his troops against the Turks; from whom, in 1696, he took the fortress of Azov, and had the satisfaction to see his fleet defeat that of the enemy. On his return to Moscow were struck the first medals which had ever appeared in Russia. The legend was, "PETER THE FIRST, the august emperor of Russia." On the reverse was AZOV, with these words, *Victorious by fire and water.* Notwithstanding this success, however, Peter was very much chagrined at having his ships all built by foreigners; having besides as great an inclination to have an harbour on the Baltic as

59
Sends some young noblemen into foreign countries;

on the Euxine Sea. These considerations determined him to send some of the young nobility of his empire into foreign countries, where they might improve. In 1697 he sent 60 young Russians into Italy; most of them to Venice, and the rest to Leghorn, in order to learn the method of constructing their galleys. Forty more were sent out by his direction for Holland, with an intent to instruct themselves in the art of building and working large ships: others were appointed for Germany, to serve in the land-forces, and to learn the military discipline of that nation. At last he resolved to travel through different countries in person, that he might have the opportunity of profiting by his own observation and experience. Of this journey we have given a short account elsewhere; and shall here only add, that in executing his great design, he lived and worked like a common carpenter. He laboured hard at the forges, rope-yards, and at the several mills for the sawing of timber, manufacturing of paper, wire-drawing, &c. In acquiring the art of a carpenter, he began with purchasing a boat, to which he made a mast himself, and by degrees he executed every part of the construction of a ship.

60
And makes the tour of Europe himself.

Of this journey we have given a short account elsewhere; and shall here only add, that in executing his great design, he lived and worked like a common carpenter. He laboured hard at the forges, rope-yards, and at the several mills for the sawing of timber, manufacturing of paper, wire-drawing, &c. In acquiring the art of a carpenter, he began with purchasing a boat, to which he made a mast himself, and by degrees he executed every part of the construction of a ship.

Besides this, Peter frequently went from Sweden to Amsterdam, where he attended the lectures of the celebrated Ruysch on anatomy. He also attended the lectures of burgomaster Witsen on natural philosophy. From this place he went for a few days to Utrecht, in order to pay a visit to King William III. of England; and on his return sent to Archangel a 60 gun ship, in the building of which he had assisted with his own hands. In 1698 he went over to England, where he employed himself in the same manner as he had done in Holland. Here he perfected himself in the art of ship-building; and having engaged a great number of artificers, he returned with them to Holland; from whence he set out for Vienna, where he paid a visit to the emperor; and was on the point of setting out for Venice to finish his improvements, when he was informed of a rebellion having broken out in his dominions. This was occasioned by the superstition and obstinacy of the Russians, who having an almost invincible attachment to their old ignorance and barbarism, had resolved to dethrone the Czar on account of his innovations. But Peter arriving unexpectedly at Moscow, quickly put an end to their machinations, and took a most severe revenge on those who had been guilty. Having then made great reformatations in every part of his empire, in 1700 he entered into a league with the kings of Denmark and Poland against Charles XII. of Sweden. The particulars of this famous war are related under the article SWEDEN. Here we shall only observe, that, from the conclusion of this war, Sweden ceased not only to be a formidable enemy to Russia, but even lost its political consequence in a great measure altogether.

61
Is obliged by a rebellion to return to his own dominions.

62
His war with Sweden.

Peter applied himself to the cultivation of commerce, arts, and sciences, with equal assiduity as to the pursuits of war; and he made such acquisitions of dominion even in Europe itself, that he may be said, at the time of his death, to have been the most powerful prince of his age. He was unfortunate in the Czarovitz his eldest son, whom he contrived to get rid of by the forms of justice (see PETER I. note B), and then ordered his wife Catharine to be crowned with the same magnificent ceremonies as if she had been a Greek empress, and to be recognised as his successor; which she accordingly was, and mounted the Russian throne upon the decease of her husband. She died, after a glorious reign, in 1727, and was succeeded by Peter II. a minor, son to the Czarovitz. Many domestic revolutions happened in Russia during the short reign of this prince; but none was more remarkable than the disgrace and exile of Prince Menzikoff, the favourite general in the two late reigns, and esteemed the richest subject in Europe. Peter died of the small-pox in 1730.

63
His assiduous spirit of improvement.

64
He settles the crown on his wife Catharine I.

Notwithstanding the despotism of Peter the Great and his wife, the Russian senate and nobility, upon the death of Peter II. ventured to set aside the order of succession which they had established. The male issue of Peter was now extinguished; and the duke of Holstein, son to his eldest daughter, was by the destination of the late empress intitled to the crown: but the Russians, for political reasons, filled their throne with Anne duchess of Courland, second daughter to John, Peter's eldest brother; though her elder sister the duchess of Mecklenburgh was alive. Her reign was extremely prosperous; and though she accepted of the crown under

65
Anne duchess of Courland called to the throne.

Russia der limitations that some thought derogatory to her dignity, yet she broke them all, asserted the prerogative of her ancestors, and punished the aspiring Dolgorucki family, who had imposed upon her limitations, with a view, as it is said, that they themselves might govern. She raised her favourite Biron to the duchy of Courland; and was obliged to give way to many severe executions on his account. Upon her death in 1740, John, the son of her niece the princess of Mecklenburgh, by Antony Ulric of Brunswic Wolfenbittel, was, by her will, intitled to the succession: but being no more than two years old, Biron was appointed to be administrator of the empire during his nonage. This destination was disagreeable to the princess of Mecklenburgh and her husband, and unpopular among the Russians. Count Munich was employed by the princess of Mecklenburgh to arrest Biron; who was tried, and condemned to die, but was sent in exile to Siberia.

66
Elizabeth
daughter of
Peter I, ob-
tains the
crown.

67
Her reign
uncommon-
ly glorious.

The administration of the princess Anne of Mecklenburgh and her husband was, upon many accounts, but particularly that of her German connections, disagreeable not only to the Russians, but to other powers of Europe; and notwithstanding a prosperous war they carried on with the Swedes, the princess Elizabeth, daughter by Catharine to Peter the Great, formed such a party, that in one night's time she was declared and proclaimed empress of the Russias; and the princess of Mecklenburgh, her husband, and son, were made prisoners.

Elizabeth's reign may be said to have been more glorious than that of any of her predecessors, her father excepted. She abolished capital punishments, and introduced into all civil and military proceedings a moderation till her time unknown in Russia: but at the same time she punished the counts Munich and Osterman, who had the chief management of affairs during the late administration, with exile. She made peace with Sweden; and settled the succession to that crown, as well as to her own dominions, upon the most equitable foundation. Having gloriously finished a war, which had been stirred up against her with Sweden, she replaced the natural order of succession in her own family, by declaring the duke of Holstein-Gottorp, who was descended from her elder sister, to be her heir. She gave him the title of grand duke of Russia; and soon after her accession to the throne, she called him to her court; where he renounced the succession to the crown of Sweden, which undoubtedly belonged to him, embraced the Greek religion, and married a princess of Anhalt-Zerbst, by whom he had a son, who is now heir to the Russian empire.

Few princes have had a more uninterrupted career of glory than Elizabeth. She was completely victorious over the Swedes. Her alliance was courted by Great Britain at the expence of a large subsidy; but many political, and some private reasons, it is said, determined her to take part with the house of Austria against the king of Prussia in 1756. Her arms alone gave a turn to the success of the war, which was in disfavour of Prussia, notwithstanding that monarch's amazing abilities both in the field and cabinet. Her conquests were such as portended the entire destruction of the Prussian power, which was perhaps saved only by her critical death on January 5. 1762.

Elizabeth was succeeded by Peter III. grand prince

of Russia and duke of Holstein; a prince whose conduct has been variously represented. He mounted the throne possessed of an enthusiastic admiration of his Prussian majesty's virtues; to whom he gave peace, and whose principles and practices he seems to have adopted as the directories of his future reign. He might have surmounted the effects even of those peculiarities, unpopular as they then were in Russia; but it is said, that he aimed at reformatations in his dominions, which even Peter the Great durst not attempt; and that he even ventured to cut off the beards of his clergy. He was certainly a weak man, who had no opinions of his own, but childishly adopted the sentiments of any person who took the trouble to teach him. His chief amusement was buffoonery; and he would sit for hours looking with pleasure at a merry-andrew singing drunken and vulgar songs. He was a stranger to the country, its inhabitants, and their manners; and suffered himself to be persuaded by those about him, that the Russians were fools and beasts unworthy of his attention, except to make them, by means of the Prussian discipline, good fighting machines. These sentiments regulated his whole conduct, and prepared the way for that revolution which improprieties of a different kind tended to hasten.

Becoming attached to one of the Vorontzoff ladies, sister to the princess Dashkoff, he disgusted his wife, who was then a lovely woman in the prime of life, of great natural talents and great acquired accomplishments; whilst the lady whom he preferred to her was but one degree above an idiot. The princess Dashkoff, who was married to a man whose genius was not superior to that of the emperor, being *dame d'honneur* and lady of the bedchamber, had of course much of the empress's company. Similarity of situations knit these two illustrious personages in the closest friendship. The princess being a zealous admirer of the French *économistes*, could make her conversation both amusing and instructive. She retailed all her statistical knowledge; and finding the empress a willing hearer, she spoke of her in every company as a prodigy of knowledge, judgment, and philanthropy. Whilst the emperor, by his buffoonery and attachment to foreign manners, was daily incurring more and more the odium of his subjects, the popularity of his wife was rapidly increasing; and some persons about the court expressed their regret, that so much knowledge of government, such love of humanity, and such ardent wishes for the prosperity of Russia, should only furnish conversations with Catharina Romanovna*. The empress and her favourite did not let these expressions pass unobserved; they continued their studies in concert; and whilst the former was employed on her famous code of laws for a great empire, the latter always reported progress, till the middling circles of Moscow and St Petersburg began to speak familiarly of the blessings which they might enjoy if these speculations could be realized.

Meanwhile Peter III. was giving fresh cause of discontent. He had recalled from Siberia count Munich, who was indeed a sensible, brave, and worthy man; but as he was smarting under the effects of Russian despotism, and had grounds of resentment against most of the great families, he did not much discourage the emperor's unpopular conduct, but only tried to moderate it and give it a system. Peter, however, was impatient.

Russia.
68
Character
of her suc-
cessor Peter
III.

69
Behaviour
of the em-
press and
princess
Dashkoff

* The Pri-
cess Dash-
koff.

70
Peter's un-
popular
conduct at
length dis-
gusts the
military.

He

^{Russia.} He publicly ridiculed the exercise and evolutions of the Russian troops; and hastily adopting the Prussian discipline, without digesting and fitting it for the constitution of his own forces, he completely ruined himself by disgusting the army.

⁷¹ They are easily gained over to the party of Catharine. What he lost was soon and easily gained by the emissaries of Catharine. Four regiments of guards, amounting to 8000 men, were instantly brought over by the three brothers Orloff, who had contrived to ingratiate themselves with their officers. The people at large were in a state of indifference, out of which they were roused by the following means. A little manuscript was handed about, containing principles of legislation for Russia, founded on natural rights, and on the claims of the different classes of people which had insensibly been formed, and become so familiar as to appear natural. In that performance was proposed a convention of deputies from all the classes, and from every part of the empire, to converse, but without authority, on the subjects of which it treated, and to inform the senate of the result of their deliberations. It passed for the work of her majesty, and was much admired.

⁷² Who then stood high in the public estimation. While Catharine was thus high in the public esteem and affection, the emperor took the alarm at her popularity, and in a few days came to the resolution of confining her for life, and then of marrying his favourite. The servants of that favourite betrayed her to her sister, who imparted the intelligence to the empress. Catharine saw her danger, and instantly formed her resolution. She must either tamely submit to perpetual imprisonment, and perhaps a cruel and ignominious death, or contrive to hurl her husband from his throne. No other alternative was left her; and the consequence was what undoubtedly was expected. The proper steps were taken; folly fell before abilities and address, and in three days the revolution was accomplished.

⁷³ A revolution in her favour quickly accomplished. When the emperor saw that all was lost, he attempted to enter Cronstadt from Oranienbaum, a town on the gulph of Finland, 39 versts, or near 26 miles from Peterburgh. The sentinels at the harbour presented their muskets at the barge; and though they were not loaded, and the men had no cartridges, he drew back. The English sailors called from ship to ship for some person to head them, declaring that they would take him in and defend him; but he precipitately withdrew. Munich received him again at Oranienbaum, and exhorted him to mount his horse and head his guards, swearing to live and die with him. He said, "No: I see it cannot be done without shedding much of the blood of my brave Holsteinians. I am not worthy of the sacrifice." The revolution was settled, and Catharine declared *autocratrix*. The crown was said to be

pressed upon her, and her son was proclaimed *her heir*, and *as such* great duke of all the Russias.

⁷⁴ Her magnanimous and moderate behaviour. She behaved with magnanimity and moderation; retained Munich; even pardoned countess Vorontzoff the emperor's favourite; and afterwards, on her marriage with Mr Paulotsky, made a handsome settlement on them. She allowed the expectations of golden days and a philosophical government to become the subject of fashionable conversation; and the princess Dashkoff(c) was completely happy. The convention of deputies was even resolved on; and as they were not to be elected by the people, except here and there for the show, Prince Galitzin and Count Panin, whom she had completely gained over, and who had the greatest abilities of any Russians about court, were at immense pains in appointing a proper set. In the mean time, a great number of showy patriotic projects were begun. A grave English clergyman was invited over to superintend the institution of schools for civil and moral education; and the empress was most liberal in her appointments. This institution failed, however, to produce the effects expected from it. The clergyman appointed, though a most excellent character and real philanthropist, had views too contracted for the sphere in which he was placed; and Mr Betskoy, the Russian *Mecenas*, to whom the empress referred him for instructions, preferred declamation, and stage-playing, and ballets, to all other accomplishments.

⁷⁶ And sends the nobles a travelling. In the mean time, elegance of all kinds was introduced before the people were taught the principles of morals. The nobles were sent a travelling; and as the Russians more easily acquire foreign languages than the people of most other nations, have great vivacity without slippancy, and in general understand play, these travellers were everywhere well received, especially at Paris, where reasons of state contributed not a little to procure to them that attention with which they were treated. They were ravished with the manners of foreign courts, and imported fashions and fineries without bounds. The sovereign turned all this to her own account, by encouraging a dissipation which rendered court favours necessary, and made the people about her forget their Utopian dreams.

⁷⁷ Convention of deputies assembled, and the issue. The convention of deputies at last assembled in the capital. The empress's book of instructions (d) came forth; and by some great things were doubtless expected. The most consequential of the deputies were privately instructed to be very cautious, and informed that carriages and guards were ready for Siberia. There was a grand procession at their presentation. Each had the honour of kissing her majesty's hand and receiving a gold medal. They met in form to recognise one another,

(c) This lady, during the progress of the revolution, certainly acted either from the most disinterested patriotism or the most generous friendship. She might have taken part with the emperor, and directed the counsels of the empire; for her sister, on whom he doated, acknowledged her superiority, and wanted nothing but pleasure. Between them they could easily have governed such a man as Peter III. but Catharine Romanovna was a theoretical enthusiast, who loved the empress because she thought her a philosopher and philanthropist; and perhaps she might entertain hopes of directing the conduct of Catharine II. as she had formerly assisted her in her patriotic studies.

(d) It is intitled, *Instructions for the Deputies to consult about a New Code of Laws, &c.* and is a very respectable work, which does honour to the empress, by whom it was undoubtedly composed.

Russia. other, then parted, and have never met since. The thing melted away without notice; and the Princess Dashkoff was handsomely given to understand, that her counsels were no longer necessary, and that she could not do better than take the amusements of the tour of Europe. She was liberally supplied, and has ever since been treated with great kindness, but kept amused with something very different from legislation.

78
Patriotic
endeavours
of the em-
press.

In the mean time, many patriotic things were really done. Taxes were frequently remitted where they were burthenfome. Every person was declared free who had served government without pay for two years. No man was allowed to send boors from his cultivated estates to his mines in Siberia, nor to any distant estates, but for the purposes of agriculture. Many colonies of German peasants were in various places settled on the crown-lands, to teach the natives the management of the dairy; a branch of rural economy of which the Russians were till that period so completely ignorant, that there is not in their language an appropriated word for *butter*, or *cheese*, or even for *cream*.

The Russians hoped to be likewise instructed in agriculture; but the colonists were poor and ignorant; and this part of the project came to nothing, like the great national schools. Other improvements however took place in favour of commerce; for all barriers were removed, and goods suffered to pass through the empire duty-free. The empress with great liberality encouraged the introduction of arts and manufactures. An academy was instituted of sculpture, painting, and architecture, &c. a magnificent and elegant building was erected for it, and many élèves supported in it at the expence of the crown. Several very promising youths have been educated in that academy; but as the Russians are childishly fond of finery, and cannot be persuaded that any thing fine was ever done by their own countrymen, the students are all, on leaving the academy, suffered to starve.

79
Her taste
for archi-
tecture;

80
And success-
ful in war.

The empress, who has a very just taste in architecture, has herself designed several buildings equally useful and ornamental to her capital (see NEVA and PETERSBURGH); and while she has thus diligently cultivated the arts of peace, she has not neglected those of war. She put her fleets on the most respectable footing, and procured a number of British officers to instruct her seamen in the science of naval tactics. By land, her successes against the Turks, the Swedes, and the Poles (see TURKEY, SWEDEN, and POLAND), compel us to believe, that her troops are better disciplined, and her generals more skilful, than any whom the greatest of her predecessors could bring into the field; and perhaps it is not too much to say, that the empire of Russia, though the people are but just emerging from a state of barbarism, is at this day the most powerful in Europe.

81
Natural di-
vision of
Russia.

Smir-
nov's Sur-
vey of the
Russian em-
pire.

Russia is divided into two great parts by a range of mountains called *Oural*, or the *Belt*, which, through the whole breadth of it, form one continual uninterrupted barrier, dividing Siberia from the remaining Russia.—That part of Russia which lies on this side of the Oural mountains presents a very extensive plain verging westward by an easy descent. The vast extent of this plain has a great variety of different climates, soils, and products. The northern part of it is very woody,

marshy, and but little fit for cultivation, and has a sensible declivity towards the White and the Frozen Seas. The other part of this vast plain includes the whole extent along the river Volga as far as the deserts, extending by the Caspian and the Azov Seas, and constitutes the finest part of Russia, which in general is very rich and fruitful, having more arable and meadow land than wood, marshes, or barren deserts.

The part lying on the other side of the Oural mountains, known by the name of Siberia, is a flat tract of land of considerable extent, declining imperceptibly towards the Glacial Sea, and equally by imperceptible degrees rising towards the south, where at last it forms a great range of mountains, constituting the borders of Russia on the side of China. Between the rivers Irtysh, Obè, and the Altay mountains, there is a very extensive plain, known by the name of *Barabinskaya Stepe*, viz. the deserts of Baraba, the northern part of which is excellent for agriculture; but the southern part, on the contrary, is a desert full of sands and marshes, and very unfit for cultivation. Between the rivers Obe and Enissey there is more woodland than open ground; and the other side of the Enissey is entirely covered with impervious woods, as far as the lake Baical; but the soil is fruitful everywhere; and wherever the trouble has been taken of clearing it of the wood, and of draining it from unnecessary water, it proves to be very rich, and fit for cultivation; and the country beyond the Baical is surrounded by ridges of high stony mountains. Proceeding on farther towards the east, the climate of Siberia becomes by degrees more and more severe, the summer grows shorter, the winter longer, and the frosts prove more intense.

With respect to the variety of climates, as well as the produce of the earth, Russia naturally may be divided into three regions or divisions, viz. into the northern, middle, and southern divisions.

These were about 20 years ago subdivided into different governments, for the better administration of justice.

The northern division, beginning from the 57th degree of latitude, extends to the end of the Russian dominions on the north, and includes the governments of St. Petersburg, Riga, Revel, Vyborg, Pleskov, Novogorod, Tver, Olonetz, Archangel, Vologda, Yaroslavl, Kostroma, Viatka, Perme, and Tobolsk. The middle division is reckoned from the 57th to the 50th degree of latitude, and includes the governments of Moscow, Smolensk, Polotsk, Moghilev, Tchernigov, Novogorod-Severskoy, Kharkov, Voronez, Koursk, Orel, Kalouga, Toola, Riazane, Vladimir, Niznei-Novogorod, Tambov, Saratov, Penza, Siabirsk, Kazane, Oufa, Kolhivane, and Irkoutsk. The southern division begins at the 50th degree of latitude, and extends to the end of Russia on the south, including the governments of Kiev, Ekatherinossav, Caucasus, and the province of Taurida. To this may be added the habitations of the Cossacks of the Don.

The northern division, though deficient in grain, fruit, and garden vegetables, has the preference before the other two in the abundance of animals, rare and valuable for their skins; in fishes of particular sorts, very useful for different purposes of life; in cattle, and metals of inferior kinds, &c. The middle division of Russia abounds in different kinds of grain, hemp, flax, cattle,

Russia.

82

Variety of
climates.

83

Products
of the nor-
thern, mid-
dle, and
southern di-
visions.

Russia

cattle, fish, bees, timber proper for every use, different kinds of wild beasts, metals, both of superior as well as of inferior kind, different precious stones, &c. This division is likewise most convenient for the habitation of mankind, on account of the temperature and pleasantness of the air. The south division has not that abundance of grain, but has the preference in different delicate kinds of fruit, quantity of fish, cattle, and wild animals, amongst which there are several species different from those which are found in the middle division. It exceeds greatly both the other divisions in plants and roots fit for dying and for medical purposes, as well as for the table; neither is it deprived of precious stones, as well as different metals.

The products of those three divisions constitute the permanent and inexhaustible riches of Russia; for, besides what is necessary for home consumption, there is a great quantity of those products exported yearly into foreign countries to the amount of several millions of rubles. These productions are brought from different places to fairs, established in different parts of Russia, where the merchants buy them up, and forward them to different ports, and other trading towns, for exportation into foreign kingdoms. These fairs are likewise the places where a considerable quantity of goods imported from foreign kingdoms is disposed of. The principal yarmankas, that is, fairs, are the yarmanka Makarievskaya, Korennaya, and Irbitskaya.

84
External
commerce
of Russia

The external commerce of Russia may be divided into two different branches; 1st, The commerce with the European nations, which is carried on by buying and selling goods either for ready money or upon credit. 2d, The commerce with the Asiatic nations, which is conducted by barter or exchange of goods.

The principal ports belonging to the first part of Russia are, on the Baltic sea, St Petersburg, Riga, Vyborg, Revel, Narva, Fredericksham, and the Baltic port; Archangel on the White sea, and Kola on the Northern Ocean; Taganrog on the sea of Azov; Kherfon, Sevastopole, Balaklava, Soudak, Theodosia, Kerche, and Phanagoria on the Black sea, besides others of smaller note. In these ports commerce is carried on, as well as in several trading towns situated on the frontiers of Poland, Sweden, and Turkey.

85
With Eu-
rope

The products of Russia exported into the different European kingdoms consist chiefly in hemp, flax, different kinds of grain, tallow, hides, sail-cloth, iron, timber, linseed, butter, hemp-oil, train-oil, wax, potashes, tar, tobacco, bristles, linens, peltry, and other goods, the greatest part of which is exported chiefly by way of St Petersburg, Riga, and Archangel; and in return from the European kingdoms they receive woollen cloths, different kinds of goods made of worsted, silk, cotton, and thread; wines and beer, white and moist sugars, silks, cotton unwrought, and yarn; French brandy, liquors, arrack, shrub, different iron tools, and toys; gold and silver in bars, in foreign money, and in other things; brilliants, pearls, galanterie goods, coffee, colours; peltry, viz. beaver and otter skins; herrings, stock-fish, salt, tobacco, different trees, oil, horses, china and earthen ware, &c. The greatest part of these goods is imported through the ports of St Petersburg and Riga, but a considerable quantity is likewise admitted by land through different frontier custom-houses.

The principal goods exported into Asia are partly the products of Russia, and partly imported from other European kingdoms, and consist of peltry and hides. The other goods are woollen cloths, bays, borax, bottles, printed linens, iron, and different kinds of iron-ware, calamancos, kerseys, glue, isinglass, cochineal, indigo, laura, tinsel, gold and silver lace, soap; all kinds of arms, as pistols, guns, sabres; different kinds of linens, printed and glazed, striped linen, ticking, pallock, crash, &c. From the Asiatic kingdoms they import different silk goods, raw silk, cotton, silk-wove stuffs, gold and silver in bars and in coin, cattle, horses, &c.

Russia.
86
And Asia.

The mountains within Russia, as well as those on its frontiers, abound with minerals of various kinds. Gold, silver, quicksilver, copper, lead, iron-ore, very powerful loadstones, mountain-crystal, amethyst, topazes of different sorts, agates, cornelian, beryl, chalcedony, onyx, porphyry, antimony, pyrites, aquamarines, chrysolites, ophites, and lapis lazuli, are found in them, besides marble, granite, trappe, maria or Muscovy glass, of remarkable size and clearness, basalt, and coal, &c.; and in every part of Siberia, but particularly in the plains of it, are found bones of animals uncommonly large, mammoth's teeth (see MAMMOTH), and other fossils.

87

Mountains,
&c.

In the Russian empire are many lakes of very large extent. 1. The Ladoga, anciently called *Nevo*, is the largest lake in Europe, extending in length 175 and in breadth 105 versts; or it is 116 English miles long and near 70 broad. It lies between the governments of St Petersburg, Olonetz, and Vyborg; and communicates with the Baltic sea by the river Neva, with the Onega lake by the river Svir, and with the Ilmen lake by the river Volkov. Several considerable rivers fall into it, as the Pasha, Sias, Oyat, and others. The Ladoga canal is made near this lake. 2. The Onega lake is situated in the government of Olonetz. It is above 200 versts long, and the greatest width of it does not exceed 80 versts. 3. The Tchude lake, or Peipus, lies between the governments of St Petersburg, Pscov, Revel, and Riga. It is near 80 versts long and 60 broad. It joins to the lake of Pscov by a large neck of water. The length of this lake is 50 and the width about 40 versts. The river Velikaya flows into it. The river Narova comes out of the lake Peipus, which by the river Embakha communicates with the lake Wirtz-Erve, and from this latter flows the river Fellin, and runs into the bay of Riga. 4. The Ilmen lake, anciently called *Moisik*, lies in the government of Novogorod. Its length is 40 and width 30 versts. The rivers Msta, Lovate, Shelone, and others, fall into it; and only one river, Volkov, runs out of it, by which it is joined with the Ladoga lake. 5. The Bielo-Ozero, that is, the White Lake, lies in the government of Novogorod. It extends 50 versts in length, and about 30 in width. There are many small rivers which run into it; but only one river, Sheksna, comes out of it, and falls into the river Volga. 6. The Altin, or Altay lake, otherwise called the *Teletsk Lake*, is situated in the government of Kolhivane. It extends in length 126 and in width about 84 versts. The river Biya comes out of it, which being joined to the river Katounya, constitute the river Obé. 7. The Baical Lake, otherwise called the *Baical Sea*, and the *Holy Sea*, lies in the government of Irkoutsk. Its extent in length is 600, and in width from

88

Lakes.

Russia. 30 to 50 versts, and in the widest places as far as 70 versts. 8. The Tchani Lake lies in the deserts of Baraba, between the rivers Obè and Irtysh. It joins with a great many smaller lakes, occupies a vast tract of land, and abounds very much in fish. 9. Between the Gulf of Finland and the White Sea there are several lakes which extend from 50 to 70 versts in length; and besides these there are many other salt lakes in different parts of Russia, such as the Ozero, that is, the lake Eltonskoye, Bogdo, Inderskoye, Ebele, Koryakovskoye, Yamilhevskoye, Borovye, and others; and the salt which is got from them serves for the use of the greatest part of the empire. To these may be added the Caspian, which, though called a sea, is more properly a lake, as it has no communication with the ocean either visible or subterraneous. See *CASPIAN-Sea*, and *PNEUMATICS*, n^o 277.

89
Rivers.

Russia boasts likewise of a considerable number of large and famous rivers. Of the Dvina or Dwina, the Neva, Dnieper or Nieper, the Don, the Volga, the Irtysh, the Onega, the Oby, and the Lena, the reader of this work will find some account under their respective names; but in this vast empire there are many other rivers worthy of notice, tho' not perhaps of such minute description. Among these the *Boug*, or, as it is sometimes written, *Bog*, rises in Poland; then directing its course to the south-east, it divides the government of Ecaterinossav from the deserts of Otchakov, now belonging to Russia, and falls into the Liman, which communicates with the Black sea.

The Kubane consists of many springs or rivulets running out of the Caucasian mountains, and divides itself into two branches, the one of which falls into the Azov Sea, and the other into the Black sea. This river, from its source to the end of it, constitutes the frontier of Russia.

The Oural, formerly Yaik, takes its rise in the Oural mountains, in the government of Oufa, which it divides from that of Caucasus, and extends its course about 3000 versts. It receives many rivers, the principal of which are the Or, Sakmara, Yleck, and Terkool.—The Kouma rises in the Caucasian mountains, and runs through the plains between Terek and Volga, and at last loses itself in the sands, before it comes to the Caspian sea. The Terek originates in the Caucasian mountains, runs between them, and then coming out, extends its course to the Caspian Sea, and receives several rivers, as the Malka, Soonja, Baksan, and Ackfay.

The Bolshaya Petchora, that is, the great Petchora, rises in the Oural mountains, in the government of Vologda, runs across the whole breadth of the government of Archangel, and falls into the Icy sea. It receives in its course several rivers, the principal of which are the Outcha and the Elma. The Enissey is formed by the junction of two rivers, the Oulookema and the Baykema, which rise in the Altay mountains in Mongolia. It runs through the whole extent of Siberia, and falls into the Icy Sea. The extent of the Enissey is about 2500 versts. It receives in its course several rivers, the principal of which are the Abakan, Elogooy, Podkamennaya Tungouska, Niznyaya Tungouska, and Tourookhan. The Yana, the Indighirka, and the Kolhima, are likewise no inconsiderable rivers in the government of Irkoutsk. The first rises in the mountains

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which overshadow the banks of the river Lena on the right hand, and extends its course 800 versts. The two last take their sources in the mountains which extend on the coasts of the Eastern sea. The length of the Indighirka is 1200 and that of Kolhima 1500 versts.—The last, near its mouth, is divided into two branches, and receives the rivers Omolon and Onooy. The Anadir is the easternmost of all the rivers in Siberia. It rises out of the lake Ioanko, in the district of Okhotsk, and runs through the eastern part of it, and then falls into the Eastern ocean. The Amour is formed by the junction of two considerable rivers, the Shilka and Argoonya, which are joined just by the frontiers of China. It runs through the Chinese dominions, and at last falls into the Eastern ocean. The Kamtschatka runs through the peninsula of the same name, extending its course from the Verkhney to Nizney Ostrog, that is, from the upper to the lower fort, and falls into the Eastern ocean. The Penjina rises in the Yablonnoy ridge of mountains, and falls into the Penjinskaya Gooba, that is, the gulf or the sea of Penjina.

In such a vast extent of country, stretching from the State of temperate so far into the frigid zone, the climate must vary considerably in different places. In the southern parts of the Russian empire, the longest day does not exceed fifteen hours and a half; whereas in the most northern, the sun in summer is seen two months above the horizon. The country in general, though lying under different climates, is excessively cold in the winter. Towards the north, the country is covered near three quarters of the year with snow and ice; and by the severity of the cold many unfortunate persons are maimed, or perish. This sort of weather commonly sets in about the latter end of August, and continues till the month of May; in which interval the rivers are frozen to the depth of four or five feet. Water thrown up into the air will fall down in icicles; birds are frozen in their flight, and travellers in their sledges. In some provinces the heats of summer are as scorching as the winter colds are rigorous.

The soil of Muscovy varies still more than the climate, according to the influence of the sun and the situation of the country. In the warmer provinces, the process of vegetation is so rapid, that corn is commonly reaped in two months after it begins to appear above the surface of the ground. Hence the great variety of mushrooms produced spontaneously in Russia, which may be considered as a comfortable relief to the poor, while they appear as delicacies at the tables of the rich. Above 1000 waggon-loads of them used to be sold annually in Moscow. Perhaps it is on account of the scarcity of provisions that such a number of fasts are instituted in the Muscovite religion.

Besides the productions already mentioned as peculiar to each of the three great natural divisions of the empire, Muscovy yields rhubarb, flax, hemp, pasture for cattle, wax, and honey. Among other vegetables, we find in Russia a particular kind of rice called *syniba*, plenty of excellent melons, and in the neighbourhood of Astracan the famous zoophyton, or animal plant; which the Muscovites call *bonnaret*, or lambkin, from its resemblance to a lamb. See the article *Scythian LAMB*.

Agriculture in general is but little understood, and less prosecuted in this country. The most considerable articles in the economy of a Russian farm are wax and

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State of
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State of
agriculture.

Russia.

honey, by which the peasant is often enriched. He cuts down a great number of trees in the forest, and sawing the trunks into a number of parts, bores each of these, and stops up the hollow at both ends, leaving only a little hole for the admittance of the bees; thus the honey is secured from all the attempts of the bear, who is extremely fond of it, and tries many different experiments for making himself master of the luscious treasure.— Of this honey the Russians make a great quantity of strong metheglin for their ordinary drink. They likewise extract from rye a spirit, which they prefer to brandy.

94
Animals.

The wild beasts in the northern part of Russia are the same with those we have mentioned in the articles of Norway and Lapland: such as rein-deer, bears, foxes, ermins, martens, fables, hares, and squirrels. In the more southern provinces the Muscovites breed black cattle, small but hardy horses, sheep, goats, and camels. The breed of cattle and horses has been enlarged by the care and under the protection of Peter and succeeding sovereigns. The whole empire abounds with wild-fowl and game of all sorts, and a variety of birds of prey; besides the different kinds of poultry, which are raised in this, as well as in other countries. The external parts and provinces of Muscovy are well supplied with sea-fish from the Northern ocean, the Baltic, or gulph of Finland, the White sea, the Black sea, and the Caspian; but the whole empire is plentifully provided with fresh-water fish from the numerous lakes and rivers, yielding immense quantities of salmon, trout, pike, sturgeon, and belluga: the last being a large fish, of whose roe the best caviare is made. Innumerable insects, like those of Lapland, are hatched by the summer's heat in the sand, morasses, and forests, with which this empire abounds; and are so troublesome as to render great part of the country altogether uninhabitable.

95
Inhabitants.

The Russian empire is inhabited by no less than 16 different nations, of which our limits will hardly permit us to give the names. The first are the Slavonic nations, comprehending the Russians, who are the predominant inhabitants of the whole empire, and the Poles, who besides occupying the countries lately wrested from the republic, live in the governments of Polatsk and Moghilev, as well as in the district of Salenghinsk and along the river Irtysh. 2. The Germanic nations, comprehending the Germans properly so called, who inhabit Esthonia and Livonia; the Swedes inhabiting the Russian Finland, as well as some of the islands on the Baltic sea; and the Danes, who inhabit the islands of the Baltic sea, the Worms, and Grofs or Great Roge. 3. The Lettonian or Livonian nations, under which are classed the original or real Lettonians or Lettish, inhabiting Livonia; and the Lithuanians, who live in the government of Polatsk and Moghilev. 4. The Finns, or Tchudi, nations who inhabit the governments of Viberg and St Petersburg, with many other districts of the empire, being branched out into no fewer than 12 different tribes. 5. The Tartarian nations, who are all either Mahometans or idolaters. The Mahometan Tartars, commonly called by the Russians *Tartare*, dwell in Kazane, and the places adjacent; at Kefimov; at Ouse, in the government of Parma; at Tomsk and its neighbourhood, and are in general a sober, industrious, cleanly, and generous people. The other Tartars

inhabit different parts of Siberia, and are intermixed with still different races, called after the towns, rivers, and other places to which their habitations are nearest.— They are, as we have said, idolaters, and governed by shamens. (See SHAMEN.) Besides these, there are in the Russian dominions the Nagay Tartars; the Crime-Tartars, inhabiting the Crimea, who, together with the land belonging to them, came under the subjection of Russia in 1783; the Mescheraki; the Bashkirs; the Kirghistzi or Kirghis-kaisaks; the Yakouti; and the white Kalnuks. 6. The Caucasian nations, which are six in number, and are each subdivided into many different tribes, of which it is probable that few of our readers have ever heard the names, except of the Circassians, who live in different settlements bordering on the river Kubane. 7. The Samoyeds or Samoeds, comprehending the Ostiacks*. These inhabit the northernmost part of Russia, along the coast of the Icy sea.— 8. The Mungalian nations, comprehending the original Mungals, who are chiefly dispersed in the deserts of Gobey; the Bourati, who live on the banks of the Baikal, and other places in the government of Irkoutsk; and the Kalnuks, consisting of four different tribes.— All these hordes speak the Mungalian language, observe the religion of Lama, and the Kalnuks live in large tents. 9. The Tongoosi, a very populous tribe, dispersed from the river Enissey as far as the sea of Okhotsk, and from the Penjinskaya Gooba beyond the Chinese frontier. They are all idolaters, and live by hunting and fishing. 10. The Kamtschadels. 11. The Koriaki. 12. The Kouriltzi. Of these three nations we have given some account under the article KAMTSCHATKA. 13. The Aleouti, who dwell in the islands between Siberia and America, and very much resemble the Esquimaux and the inhabitants of Greenland.— They live in large huts, and seem to be idolaters.— 14. The Arintzi, a very numerous people scattered in the government of Kolhivane. 15. The Yukaghiri, who are dispersed on the coasts of the Glacial sea, about the rivers Yana, Kolhima, and Lena, and as far as the source of the Anadir. 16. The Tchouktchi, who occupy the north-eastern part of Siberia, between the rivers Kolhima and Anadir. Besides these sixteen different nations, there are scattered through the Russian empire vast numbers of Buckharian Tartars, Persians, Georgians, Indians, Greeks, Servians, Albanians, Bulgarians, Moldavians, Valekians, Armenians, and Jews.

The empire of Russia is so widely extended, that notwithstanding the number of nations which it comprehends, it must be considered as by no means populous. At the last revision it was found to contain 26 millions of souls; but it is to be observed, that the nobility, clergy, land as well as sea forces, different officers, servants belonging to the court, persons employed under government in civil and other offices; the students of different universities, academies, seminaries, and other schools; hospitals of different denominations; likewise all the irregular troops, the roving hordes of different tribes, foreigners and colonists, or settlers of different nations—are not included in the above-mentioned number: but with the addition of all these, the population of Russia, of both sexes, may be supposed to come near to 28 millions.

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96
Population.

Russia.

Russia.
96
Character.

To such a vast variety of people, nations, and languages, it is needless to observe, that no general character can with truth be applied. The native Russians are stigmatised by their neighbours as ignorant and brutal, totally resigned to sloth, and addicted to drunkenness, even in the most beastly excess; nay, they are accused of being arbitrary, perfidious, inhuman, and destitute of every social virtue. There is not a phrase in their language analogous to ours, "the manners or the sentiments of a gentleman;" nor does *gentleman* with them express any thing moral. Indeed they have no such distinction. Cunning is *professed* and *gloried in* by all; and the nobleman whom you detect telling a lie is vexed, but not in the least ashamed. In the whole *reglement* of the marine by Peter the Great, there is not one word addressed to the honour, or even to the probity, of his officers. Hopes of reward, and the constant fear of detection and punishment, are the only motives touched on. In every ship of war, and in every regiment, there is a fiscal or authorized spy, a man of respectable rank, whose letters must not be opened but at the risk of the great knout (see *Knout*); and he is required by express statute to give monthly reports of the behaviour of the officers and privates.

Such regulations we cannot think well adapted to improve the morals of the people; yet we believe they have been improved by the care, assiduity, and example of some of their late sovereigns. Certain it is, the vice of drunkenness was so universally prevalent among them, that Peter I. was obliged to restrain it by very severe edicts, which, however, have not produced much effect. They numbered in the city of Moscow no fewer than 4000 brandy-shops, in which the inhabitants used to sit away their time in drinking strong liquors and smoking tobacco. This last practice became so dangerous, among persons in the most beastly state of intoxication, that a very severe law was found necessary to prevent the pernicious consequences, otherwise the whole city might have been consumed by conflagrations. The nobility were heretofore very powerful, each commanding a great number of vassals, whom they ruled with the most despotic and barbarous authority; but their possessions have been gradually circumscribed, and their power transferred in a great measure to the czar, on whom they are now wholly dependent.

98
Distinctions
of rank.

At present there is no other degree of the nobility but that of the boyars: these are admitted to the council, and from among them the waiwodes, governors, and other great officers, are nominated, and their ranks with respect to each other are regulated by the importance of their respective offices.

Alexis, who introduced this order of precedence, abhorred the personal abasement of the inferior classes to their superiors, which he would not accept of when exhibited to himself; and it may appear surprising that Peter, who despised mere ceremonials, should have encouraged every extravagance of this kind. In a few years of his reign, the beautiful simplicity of designation and address which his father had encouraged was forgotten, and the cumbersome and almost ineffable titles which disgrace the little courts of Germany were crowded into the language of Russia. He enjoined the lowest order of gentlemen to be addressed by the phrase, *your respectable birth*; the next rank, by *your high good*

birth; the third, *your excellence*; the fourth, *your high excellence*; then came *your brilliancy* and *high brilliancy*. *Highness* and *majesty* were reserved for the great duke and the czar.

These titles and modes of address were ordered with all the regularity of the manual exercise; and the man who should omit any of them when speaking to his superior might be lawfully beaten by the offended boyar. Before this period, it was polite and courtly to speak to every man, even the heir apparent, by adding his father's name to his own; and to the great duke, Paul Petrovitz was perfectly respectful, or a single word signifying *dear father*, when he was not named. Tho' pompous titles were unknown among them before the era of Peter, the subordination of ranks was more complete than in any other European nation; but with this simplicity peculiar to them and the Poles, that they had but three ranks, the sovereign, the noblesse or gentry, and the serfs. It was not till very lately that the mercantile rank formed any distinction; and that distinction is no more than the freedom of the person, which was formerly a transferable commodity belonging to the boyar. Notwithstanding this simplicity, which put all gentlemen on a level, the subscription of a person holding an inferior office was not *servant*, but *slave*; and the legal word for a petition in form was *tchelobiti*, which signifies, "a beating with the forehead," i.e. striking the ground with the forehead; which was actually done. The father of Alexis abolished the practice; but at this day, when a Russian petitions you, he touches his forehead with his finger; and if he be very earnest, he then puts his finger to the ground.

The Russian nobles formerly wore long beards, and long robes with strait sleeves dangling down to their ancles: their collars and shirts were generally wrought with silk of different colours: in lieu of hats, they covered their heads with furred caps; and, instead of shoes, wore red or yellow leathern buskins. The dress of the women nearly resembled that of the other sex; with this difference, that their garments were more loose, their caps fantastical, and their shift-sleeves three or four ells in length, gathered up in folds from the shoulder to the fore-arm. By this time, however, the French fashions prevail among the better sort throughout all Muscovy.

The common people are generally tall, healthy, and robust, patient of cold and hunger, inured to hard-ships, and remarkably capable of bearing the most sudden transition from the extremes of hot or cold weather. Nothing is more customary than to see a Russian, who is over-heated and sweating at every pore, strip himself naked, and plunge into a river: nay, when their pores are all opened in the hot bath, to which they have daily recourse, they either practise this immersion, or subject themselves to a discharge of some pailfuls of cold water. This is the custom of both men and women, who enter the baths promiscuously, and appear naked to each other, without scruple or hesitation.

A Russian will subsist for many days upon a little oatmeal and water, and even raw roots: an onion is a regale; but the food they generally use in their journeys is a kind of rye-bread, cut into small square pieces, and dried again in the oven: these, when they are hungry, they soak in water, and eat as a very com-

Russia.

99
Manners
and cus-
toms.

Russia. fortable repast. Both sexes are remarkably healthy and robust, and accustom themselves to sleep every day after dinner.

100
Of their
marriages.

The Russian women are remarkably fair, comely, strong, and well-shaped, obedient to their lordly husbands, and patient under discipline: they are even said to be fond of correction, which they consider as an infallible mark of their husband's conjugal affection; and they pout and pine if it be withheld, as if they thought themselves treated with contempt and disregard. Of this neglect, however, they have very little cause to complain; the Russian husband being very well disposed, by nature and inebriation, to exert his arbitrary power. Some writers observe, that, on the wedding-day, the bride presents the bridegroom with a whip of her own making, in token of submission; and this he fails not to employ as the instrument of his authority. Very little ceremony is here used in match-making, which is the work of the parents. Perhaps the bridegroom never sees the woman till he is joined to her for life. The marriage being proposed and agreed to, the lady is examined, stark-naked, by a certain number of her female relations; and if they find any bodily defect, they endeavour to cure it by their own skill and experience. The bride, on her wedding-day, is crowned with a garland of wormwood, implying the bitterness that often attends the married state. When the priest has tied the nuptial knot at the altar, his clerk or sexton throws upon her head a handful of hops, wishing that she may prove as fruitful as the plant thus scattered. She is muffled up, and led home by a certain number of old women, the parish-priest carrying the cross before; while one of his subalterns, in a rough goat-skin, prays all the way that she may bear as many children as there are hairs on his garment. The new-married couple, being seated at table, are presented with bread and salt; and a chorus of boys and girls sing the epithalamium, which is always grossly obscene. This ceremony being performed, the bride and bridegroom are conducted to their own chamber by an old woman, who exhorts the wife to obey her husband, and retires. Then the bridegroom desires the lady to pull off one of his buskins, giving her to understand, that in one of them is contained a whip, and in the other a jewel or a purse of money. She takes her choice; and if she finds the purse, interprets it into a good omen; whereas should she light on the whip, she construes it into an unhappy pretage, and instantly receives a lash as a specimen of what she has to expect. After they have remained two hours together, they are interrupted by a deputation of old women, who come to search for the signs of her virginity: if these are apparent, the young lady ties up her hair, which before consummation hung loose over her shoulders, and visits her mother, of whom she demands the marriage portion. It is generally agreed, that the Muscovite husbands are barbarous even to a proverb; they not only administer frequent and severe correction to their wives, but sometimes even torture them to death, without being subject to any punishment for the murder.

The canon law of Muscovy forbids the conjugal commerce on Mondays, Wednesdays, and Fridays; and whoever transgresses this law, must bathe himself before he enters the church-porch. He that marries a second

wife, the first being alive, is not admitted farther than the church-door; and if any man espouses a third, he is excommunicated: so that though bigamy is tolerated, they nevertheless count it infamous. If a woman is barren, the husband generally persuades her to retire into a convent: if fair means will not succeed, he is at liberty to whip her into condescension. When the czar, or emperor, has an inclination for a wife, the most beautiful maidens of the empire are presented to him for his choice.

The education of the czarévitz, or prince royal, is intrusted to the care of a few persons, by whom he is strictly kept from the eyes of the vulgar, until he hath attained the 15th year of his age: then he is publicly exposed in the market-place, that the people, by viewing him attentively, may remember his person, in order to ascertain his identity; for they have more than once been deceived by impostors.

Such is the slavery in which the Muscovites of both sexes are kept by their parents, their patrons, and the emperor, that they are not allowed to dispute any match that may be provided for them by these directors, however disagreeable or odious it may be. Officers of the greatest rank in the army, both natives and foreigners, have been saddled with wives by the sovereign in this arbitrary manner. A great general some time ago deceased, who was a native of Britain, having been pressed by the late czarina to wed one of her ladies, saved himself from a very disagreeable marriage, by pretending his constitution was so unsound, that the lady would be irreparably injured by his compliance.

In Russia, the authority of parents over their children is almost as great as it was among the ancient Romans, and is often exercised with equal severity. Should a father, in punishing his son for a fault, be the immediate cause of his death, he could not be called to account for his conduct; he would have done nothing but what the law authorized him to do. Nor does this legal tyranny cease with the minority of children; it continues while they remain in their father's family, and is often exerted in the most indecent manner. It is not uncommon, even in St Petersburg, to see a lady of the highest rank, and in all the pomp and pride of youthful beauty, standing in the court-yard with her back bare, exposed to the whip of her father's servants. And so little disgrace is attached to this punishment, that the same lady will sit down at table with her father and his guests immediately after she has suffered her flogging, provided its severity has not confined her to bed.

The Muscovites are fond of the bagpipe, and have a kind of violin, with a large belly like that of a lute: but their music is very barbarous and defective. Nevertheless, there are public schools, in which the children are regularly taught to sing. The very beggars ask alms in a whining cadence, and ridiculous sort of recitative. A Russian ambassador at the Hague, having been regaled with the best concert of vocal and instrumental music that could be procured, was asked how he liked the entertainment? he replied, "Perfectly well: the beggars in my country sing just in the same manner." The warlike music of the Russians consists in kettle-drums and trumpets: they likewise use hunting horns; but they are not at all expert in the performance.

Russia.

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Authority
of parents
over their
children.

102
Music and
dancing.

Russia. formance. It has been said, that the Russians think it beneath them to dance, and that they call in their Polish or Tartarian slaves to divert them with this exercise in their hours of dissipation. Such may have been the case formerly, or may be so now, in the distant and most barbarous provinces of the empire; but at St Petersburg dancing is at present much relished, and a minuet is nowhere so gracefully performed in Europe as by the fashionable people in that metropolis.

103
Language.

104
Learning
and science.

We have elsewhere observed, that the Russian language is a dialect of the Slavonic, and the purest perhaps that is now anywhere to be found (see *PHILOLOGY*, Sect. ix. § 3.); but they have nothing ancient written in it, except a translation of Chrysostom's Offices for Easter, which are at this day good Russian, and intelligible to every boor, though certainly not less than 800 years old. There is no Russian poetry which there is reason to believe 200 years old; and the oldest translation of the Scriptures into that language is but a late thing, and come to them from Koningsberg. Science has made but a very small progress among them; and the reputation of the imperial academy at St Petersburg has been hitherto supported by the exertions of foreigners. For antiquarian research they have as little relish as for scientific investigation. Every thing, to please, must be new; and the only elucidations which we have of their antiquities are the performances of Germans and other foreigners, such as professors Bayer, Muller, and Gmelin. One native has indeed shown some desire to recover and preserve what he can of their most ancient poetry; but in his researches, he seems more indebted to an exquisitely nice ear than to any erudition. Erudition indeed they hold in the most sovereign contempt. No gentleman is ever taught Latin or Greek; and were a Russian stranger in company to give any hint of his possessing such knowledge, every man with a sword would draw away his chair, and set him down for a charity-boy. Peter the Great and the present empress have done what sovereigns could do to dispel these clouds of ignorance, by instituting schools and colleges, and giving the masters and professors military rank; but all in vain. One of the most accomplished scholars of the age, after having made himself extremely agreeable to a company of ladies, by means of his taste in music, and a sword at his side, was instantly deserted by them upon some person's whispering through the room that he was a man of learning; and before his fair companions would be reconciled to him, he was obliged to pretend that he was a lieutenant-colonel, totally illiterate.

The two first sentences of Prince Shtcherbatoff's dedication of his History of Russia, which was printed in three volumes 4to, in 1770, afford an admirable specimen of Russian literature. "The history of the human understanding (says this dedicatory) assures us, that everywhere the sciences have followed the progress of the prosperity and the strength of kingdoms. When the Grecian arms had overthrown the greatest monarchy then in the world, when they had the famous generals Miltiades, Themistocles, Aristides, Conon, and Alcibiades, at the same time flourished among them Anaximander, Anaxagoras, Archytas, Socrates, and Plato. And when Augustus had conquered the world, and had shut the gates of the temple of Janus, and the proud Romans, under his happy government, cheerfully obeyed his com-

mands, then did Titus Livius, Thucydides, Virgil, and Horace, adorn his court, and celebrate his glory."—A passage so replete as this with blunders and anachronisms it would surely be difficult to find in any other author.

Russia.

105

Religion.

The Russians were converted to the Christian religion towards the latter end of the tenth century, as has been already related. Since that period they have confessed the articles of the Greek church, mingled with certain superstitious ceremonies of their own. They do not believe in the pope's infallibility or supremacy, or even hold communion with the see of Rome: they use auricular confession, communicate in both kinds, adopt the Athanasian creed, and adhere to the established liturgy of St Basil. They worship the Virgin Mary, and other saints; and pay their adorations to crosses and relics. They observe four great fasts in the year, during which they neither taste fish, flesh, nor any animal production: they will not drink after a man who has eaten flesh, nor use a knife that has cut meat in less than 24 hours after it has been used; nor will they, even though their health is at stake, touch any thing in which hartshorn or any animal substance has been infused. While this kind of Lent continues, they subsist upon cabbage, cucumbers, and rye-bread, drinking nothing stronger than a sort of small beer called *quass*†. They likewise fast every Wednesday and Friday. Their common penance is to abstain from every species of food and drink, but bread, salt, cucumbers, and water. They are ordered to bend their bodies, and continue in that painful posture, and between whiles to strike their head against an image.

† See Peasants

The Muscovites at all times reject as impure, horse-flesh, elk, veal, hare, rabbit, ass's milk, mare's milk, and Venice-treacle, because the flesh of vipers is an ingredient; also every thing that contains even the smallest quantity of musk, civet, and castor: yet they have no aversion to swine's flesh; on the contrary, the country produces excellent bacon. They celebrate 15 grand festivals in the year. On Palm-sunday there is a magnificent procession, at which the czar assists in person and on foot. He is apparelled in cloth of gold; his train is borne up by the prime of the nobility, and he is attended by his whole court. He is immediately preceded by the officers of his household, one of whom carries his handkerchief on his arm, lying upon another of the richest embroidery. He halts at a sort of platform of free-stone, where, turning to the east, and bending his body almost double, he pronounces a short prayer: then he proceeds to the church of Jerusalem, where he renews his devotion. This exercise being performed, he returns to his palace, the bridle of the patriarch's horse resting upon his arm. The horse's head being covered with white linen, is held by some nobleman; while the patriarch, sitting sideways, and holding a cross in his hand, distributes benedictions as he moves along: on his head he wears a cap edged with ermin, adorned with loops and buttons of gold and precious stones: before him are displayed banners of consecrated stuff, in a variety of colours. Above 500 priests walk in the procession; those who are near the patriarch bearing pictures of the Virgin Mary, richly ornamented with gold, jewels, and pearls, together with crosses, relics, and religious books, including a copy of the Gospels, which they reckon to be of inestimable

Russia. estimable value. In the midst of this procession is borne a triumphal arch; and on the top an apple-tree covered with fruit, which several little boys inclosed in the machine endeavour to gather. The lawyers and laity carry branches of willow; the guards and the spectators prostrate themselves on the ground while the procession halts; and after the ceremony, the patriarch presents a purse of 100 rubles to the czar, who perhaps invites him to dine at his table. During the season of Easter, the whole empire is filled with mirth and rejoicing: which, however, never fails to degenerate into heat and debauchery; even the ladies may indulge themselves with strong liquors to intoxication without scandal. When a lady sends to inquire concerning the health of her guests whom she entertained over-night, the usual reply is, "I thank your mistress for her good cheer: by my troth, I was so merry that I don't remember how I got home."

During these carnivals, a great number of people, in reeling home drunk, fall down and perish among the snow. It is even dangerous to relieve a person thus overtaken; for, should he die, the person who endeavoured to assist him is called before the judge, and generally pays dear for his charity.

The Muscovite priests use exorcisms at the administration of baptism. They plunge the child three times over head and ears in water, and give it the sacrament of the Lord's Supper in one species, until it hath attained the age of seven; after which the child is indulged with it in both kinds. They likewise administer the sacrament to dying persons, together with extreme unction; and if this be neglected, the body is denied Christian burial. Soon as the person expires, the body is deposited in a coffin, with a luncheon of bread, a pair of shoes, some few pieces of money, and a certificate signed by the parish-priest, and directed to St Nicholas, who is one of their great patrons. They likewise hold St Andrew in great veneration, and ridiculously pretend they were converted by him to Christianity. But next to St Nicholas, they adore St Anthony of Padua, who is supposed to have sailed upon a mill-stone through the Mediterranean and Atlantic, and over the lakes Ladoga and Onega, as far as Novogorod. Every house is furnished with an image of St Nicholas, carved in the most rude and fantastic manner; and when it becomes old and worm-eaten, the owner either throws it into the river with a few pieces of coin, saying, "Adieu, brother;" or returns it to the maker, who accommodates him with a new image for a proper consideration. The good women are very careful in adorning their private St Nicholases with rich clothes and jewels; but on any emergency, these are resumed, and the saint left as naked as he came from the hand of the carpenter.

There are monasteries in Russia; but neither the monks nor the nuns are subject to severe restrictions. The friars are either horse-jockeys, or trade in hops, wheat, and other commodities; the sisters are at liberty to go abroad when they please, and indulge themselves in all manner of freedoms.

Heretofore liberty of conscience was denied, and every convicted heretic was committed to the flames; but since the reign of Peter, all religions and sects are tolerated throughout the empire. Roman Catholics, Lutherans, Calvinists, Armenians, Jews, and Mahometans, enjoy the free exercise of their respective forms

of worship; though it was not without great difficulty, and by dint of extraordinary solicitation from different powers, that the Romish religion was allowed. Peter knowing the dangerous tenets of a religion that might set the spiritual power of the pope at variance with the temporal power of the emperor, and being well acquainted with the meddling genius of its professors, held out for some time against the intercession of Germany, France, and Poland; and though at length he yielded to their joint interposition, he would by no means suffer any Jesuit to enter his dominions.

The government of Russia is mere despotism. The whole empire is ruled by the arbitrary will and pleasure of the sovereign, who is styled the *czar* or *tsar*, a title which is probably a corruption of *Cæsar*. Heretofore he was styled *grand duke of Muscovy*; but since the reign of Peter, he is dignified with the appellation of *emperor of Russia*; and the present sovereign is styled *empress of all the Russias*. The emperor is absolute lord, not only of all the estates in the empire, but also of the lives of his subjects; the greatest noblemen call themselves his *slaves*, and execute his commands with the most implicit obedience. The common people revere him as something supernatural; they never mention his name, or any thing immediately belonging to him, without marks of the most profound respect and awful veneration. A man asking a carpenter at work upon one of the czar's warehouses, what the place was intended for? answered, "None but God and the czar knows."

The nobility of Russia were formerly rich and powerful, and ruled despotically over their inferiors: but we have seen how the father of Peter the Great contrived to strip them of their privileges, and they are now venal dependants on the court. They still retain the titles of their ancestors, though many of them are in the most abject poverty and contempt.

All the peasants in the empire are considered as immediate slaves belonging to the czar, to the boyars, or to the monasteries. The value of estates is computed, not by the extent or quality of the land, but from the number of those peasants, who may be sold, alienated, or given away, at the pleasure of their masters. The number of these husbandmen, whether living in villages or in the open country, being known, the czar, by requiring a certain proportion of each lord or proprietor, can raise 300,000 men in less than 40 days.

The administration is managed by a grand council, called *dumnoy boyaren*, or "council of the boyars," who are the grandees of the empire, and act as privy counsellors. To this are subservient six inferior chambers and courts of judicature, provided each with a president. The first regulates every thing relating to ambassadors and foreign negotiations; the second takes cognizance of military affairs; the third manages the public revenues of the empire; the business of the fourth is to encourage, protect, and improve trade and commerce. The two last hear and determine in all causes, whether civil or criminal.

Peter divided the empire into the eight governments of Moscow, Archangel, Asoph, Casan, Astracan, Chioff and the Ukraine, Siberia, Livonia, comprehending Ingria, Plescow, and Novogorod, Smolensko, and Veronitz. The governors or waivodes were vested with power to dispose of all employments civil and military, and receive the revenues. They were directed to defray

Russia. defray all expences in their respective governments, and send a certain yearly sum to the great treasury. In a word, they enjoyed absolute power in every thing but what related to the regular troops, which, though quartered in their jurisdiction, were neither paid nor directed by them, but received their orders immediately from the czar or his generals.

107
Administra-
tion of
justice.

In 1775 the present empress made a complete new-modelling of the internal government in a form of great simplicity and uniformity. By that reglement she divided the whole empire into 43 governments, as we have already mentioned, placing over each, or where they are of less extent, over two contiguous governments, a governor-general with very considerable powers. She subdivided each government into provinces and districts; and for the better administration of justice erected in them various courts of law, civil, criminal, and commercial, analogous to those which are found in other countries. She established likewise in every government, if not in every province, a tribunal of conscience, and in every district a chamber for the protection of orphans. Amidst so many wise institutions a chamber for the administration of her imperial majesty's revenues was not forgotten to be established in each government, nor a tribunal of police in each district. The duty of the governor-general, who is not properly a judge, but the guardian of the laws, is to take care that the various tribunals in his government discharge their respective duties, to protect the oppressed, to enforce the administration of the laws; and when any tribunal shall appear to have pronounced an irregular sentence, to stop the execution till he make a report to the senate and receive her majesty's orders: It is his business likewise to see that the taxes be regularly paid; and, on the frontiers of the empire, that the proper number of troops be kept up, and that they be attentive to their duty.

This reglement contains other institutions, as well as many directions for the conducting of law-suits in the different courts, and the administration of justice, which do her majesty the highest honour; but the general want of morals, and what we call a sense of honour, in every order of men through this vast empire, must make the wisest regulations of little avail. Russia is perhaps the only nation in Europe where the law is not an incorporated profession. There are no seminaries where a practitioner must be educated. Any man who will pay the fees of office may become an attorney, and any man who can find a client may plead at the bar. The judges are not more learned than the pleaders. They are not fitted for their offices by any kind of education; nor are they necessarily chosen from those who have frequented courts and been in the practice of pleading. A general, from a successful or an equivocal campaign, may be instantly set at the head of a court of justice; and in the absence of the imperial court from St Petersburg, the commanding officer in that city, whoever he may be, presides *ex officio* in the high court of justice. The other courts generally change their presidents every year. Many inconveniences must arise from this singular constitution; but fewer, perhaps, than we are apt to imagine. The appointment to so many interior governments makes the Russian nobility acquainted with the gross of the ordinary business of law-courts; and a statute or imperial edict is law in every case. The great obstacles to the admini-

nistration of justice are the contrariety of the laws and the venality of the judges. From inferior to superior courts there are two appeals; and in a great proportion of the causes the reversal of the sentence of the inferior court subjects its judges to a heavy fine, unless they can produce an edict in full point in support of their decision. This indeed they seldom find any difficulty to do; for there is hardly a case so simple but that edicts may be found clear and precise for both parties; and therefore the judges, sensible of their safety, are very seldom incorruptible. To the principle of honour, which often guides the conduct of judges in other nations, they are such absolute strangers, that an officer has been seen sitting in state and distributing justice from a bench to which he was chained by an iron collar round his neck, for having the day before been detected in conniving at smuggling. This man seemed not to be ashamed of the crime, nor did any one avoid his company in the evening.

Few crimes are capital in Russia: murder may be atoned by paying a sum of money; nay, the civil magistrate takes no cognizance of murder, without having previously received information at the suit of some individuals. Criminals were punished with torture and the most cruel deaths till the reign of the illustrious Catharine I. when a more merciful system took place, and which the present empress has since confirmed by law. See the articles *CATHARINE I. of Russia*, and *ELIZABETH Petrowna*.

We have already mentioned the traffic of the Russians with the different nations both of Asia and Europe, and specified iron as one of the articles which they export. We may here add, that in 1792 there were in the government of Parma alone, which lies in the northern division of the empire, 88 copper and iron works belonging to the government and private persons, and three gold works. The metals extracted in these works are chiefly conveyed to St Petersburg by water-carriage on the river Tchusovaya, which falls into the Kama. With respect to the revenue of Russia, it continually fluctuates, according to the increase of commerce or the pleasure of the czar, who has all the wealth of the empire at his disposal. He monopolizes all the best furs, mines, minerals, and the trade by land to the East Indies; he farms out all the tobacco, wine, brandy, beer, mead, and other liquors; the inns, taverns, public houses, bath, and sweating-houses. The customs upon merchandize, the imposts upon corn, and toll exacted from cities, towns, and villages, are very considerable. He possesses demesnes to a very great value; inherits the effects of all those that die intestate, or under accusation of capital crimes; derives a duty from all law-suits; and to sum up the whole, can command the fortunes of all his subjects. All these articles produce a large revenue, which was three years ago estimated at upwards of 40,000,000 rubles, or L. 6,333,333: 6: 8 Sterling; but then the intrinsic value of money is at least three times greater in Russia than in Britain. The expences in time of peace never exceed 38,000,000 rubles: the remainder is not treasured up, but is employed by her imperial majesty in constructing public edifices, making harbours, canals, roads, and other useful works, for the glory of the empire and the benefit of her subjects.

The standing army of Russia is computed at 250,000 men; besides these, the Russians can assemble a body of

Russia.

108
Trade and
revenue.

Rust
||
Ruta.

of 40,000 irregulars, Calmucks, Cossacks, and other Tartars, who live under their dominion. But the number may be doubled on any emergency. The czarina has likewise a considerable fleet in the Baltic, and a great number of formidable galleys, frigates, fire-ships, and bomb-ketches.

RUST, the flower or calx of any metal, procured by corroding and dissolving its superficial parts by some menstruum. Water is the great instrument or agent in producing rust: and hence oils, and other fatty bodies, secure metals from rust; water being no menstruum for oil, and therefore not able to make its way through it. All metals except gold are liable to rust; and even this also if exposed to the fumes of sea-salt. For remedies against rust, see IRON, *par. ult.*

RUSTIC, in architecture, implies a manner of building in imitation of nature, rather than according to the rules of art. See ARCHITECTURE.

Rustic Gods, dii rustici, in antiquity, were the gods of the country, or those who presided over agriculture, &c. Varro invokes the 12 *dii consentes*, as the principal among the rustic gods; viz. Jupiter, Tellus, the Sun, Moon, Ceres, Bacchus, Rubigus, Flora, Minerva, Venus, Lympha, and Good Luck. Besides these 12 arch-rustic gods, there were an infinity of lesser ones; as Pales, Vertumnus, Tutelina, Fulgor, Sterculius, Mellona, Jugatinus, Collinus, Vallonia, Terminus, Sylvanus, and Priapus. Struvius adds the Satyrs, Fauns, Sileni, Nymphs, and even Tritons; and gives the empire over all the rustic gods to the god Pan.

Rustic Order, that decorated with rustic quoins, rustic work, &c.

Rustic Work, is where the stones in the face, &c. of a building, instead of being smooth, are hatched, or picked with the point of a hammer.

RUSTRE, in heraldry, a bearing of a diamond shape, pierced through in the middle with a round hole. See HERALDRY.

RUT, in hunting, the venery or copulation of deer.

RUTA, RUE: A genus of the monogynia order, belonging to the decandria class of plants; and in the natural method ranking under the 26th order, *Multiflorae*. The calyx is quinquepartite; the petals concave; the receptacle surrounded with 10 melliferous pores; the capsule is lobed. In some flowers, a fifth part of the number is excluded. There are several species; of which the most remarkable is the *hortensis*, or common broad-leaved garden rue, which has been long cultivated for medicinal use. This rises with a shrubby stalk to the height of five or six feet, sending out branches on every side, garnished with decomposed leaves, whose small lobes are wedge-shaped, of a grey colour, and have a strong odour. The flowers are produced at the end of the branches in bunches almost in the form of umbels: they are composed of four yellow concave petals which are cut on their edges, and eight yellow stamina which are longer than the petals, terminated by roundish summits. The germen becomes a roundish capsule, with four lobes punched full of holes containing rough black seeds.

Rue has a strong ungrateful smell, and a bitterish penetrating taste: the leaves, when full of vigour, are extremely acid, insomuch as to inflame and blister the skin, if much handled. With regard to their medicinal virtues, they are powerfully stimulating, attenuating, and detergent; and hence, in cold phlegmatic habits,

they quicken the circulation, dissolve tenacious juices, open obstructions of the excretory glands, and promote the fluid secretions. The writers on the materia medica in general have entertained a very high opinion of the virtues of this plant. Boerhaave is full of its praises; particularly of the essential oil, and the distilled water cohobated or re-distilled several times from fresh parcels of the herb. After extravagantly commending other waters prepared in this manner, he adds, with regard to that of rue, that the greatest commendations he can bestow upon it fall short of its merit: "What medicine (says he) can be more efficacious for promoting sweat and perspiration, for the cure of the hysteric passion and of epilepsies, and for expelling poison?" Whatever service rue may be of in the two last cases, it undoubtedly has its use in the others: the cohobated water, however, is not the most efficacious preparation of it. An extract made by rectified spirit contains in a small compass the whole virtues of the rue; this menstruum taking up by infusion all the pungency and flavour of the plant, and elevating nothing in distillation. With water, its peculiar flavour and warmth arise; the bitterness, and a considerable share of the pungency, remaining behind.

Ruta Baga, or Swedish turnip. See HUSBANDRY, p. 761.

BOOK OF RUTH, a canonical book of the Old Testament; being a kind of appendix to the book of Judges, and an introduction to those of Samuel; and having its title from the person whose story is here principally related. In this story are observable the ancient rights of kindred and redemption; and the manner of buying the inheritance of the deceased, with other particulars of great note and antiquity. The canonicalness of this book was never disputed; but the learned are not agreed about the epocha of the history it relates. Ruth the Moabitess is found in the genealogy of our Saviour. Matth. i. 5.

RUTILUS. See CYPRINUS, n° 6.

RUTHERGLEN, or by contraction RUGLEN, the head borough of the netherward of Lanarkshire in Scotland, is situated in N. Lat. 55° 51', and W. Long. 4° 13'; about two miles south-east of Glasgow, and nine west of Hamilton. Few towns in Scotland can lay greater claim to antiquity than Rutherglen. Maitland, in his History of the Antiquities of Scotland, vol. i. p. 92. tells us, that it was founded by a king Reuther, from whom it derived its name; and a tradition of the same import prevails among the inhabitants. But without laying any stress on the authority of tradition, which is often false and always doubtful, we find, from several original charters still preserved, that it was erected into a royal borough by king David I. about the year 1126.

The territory under the jurisdiction of the borough was extensive, and the inhabitants enjoyed many distinguished privileges, which were however gradually wrested from them, by political influence, in favour of Glasgow, which in latter times rose into consequence by trade and manufactures. The ancient dimensions of the place are now unknown; but in the fields and gardens towards the east the foundations of houses are occasionally discovered. It is now of a very reduced size, consisting but of one principal street and a few lanes, and containing about 1631 inhabitants.

About 150 yards to the south of the main street

Ruta
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Rutherglen.

Ruther-
glen.

is a kind of lane, known by the name of *Dins-dykes*. A circumstance which befel the unfortunate queen Mary, immediately after her forces were routed at the battle of Langside, has ever since continued to characterise this place with an indelible mark of opprobrium. Her majesty, during the battle, stood on a rising ground about a mile from Rutherglen. She no sooner saw her army defeated than she took her precipitate flight to the south. *Dins-dykes* unfortunately lay in her way. Two rustics, who were at that instant cutting grafs hard by, seeing her majesty fleeing in haste, rudely attempted to intercept her, and threatened to cut her in pieces with their scythes if she presumed to proceed a step further. Neither beauty, nor even royalty itself, can at all times secure the unfortunate when they have to do with the unfeeling or the revengeful. Relief however was at hand; and her majesty proceeded in her flight.

Adjoining to a lane called the *Back-row* stood the castle of Rutherglen, originally built at a period coeval, it is reported, with the foundation of the town. This ancient fortress underwent several sieges during the unhappy wars in the days of king Robert Bruce, and it remained a place of strength until the battle of Langside; soon after which it was destroyed by order of the regent, to revenge himself on the Hamilton family, in whose custody it then was. The foundations of the buildings are now erased, and the site converted into dwelling-houses and gardens.

The kirk of Rutherglen, an ancient building of the Saxon-Gothic style, was rendered famous by two transactions, in which the fate of Sir William Wallace and his country was deeply concerned. In it a truce was concluded between Scotland and England in the year 1297 (*Henry's Life of Wallace*, Book VI. verse 862.), and in it Sir John Monteath bargained with the English to betray Wallace his friend and companion (*Life of Wallace*, Book XI. verse 796). This ancient building, having become incommodious, was, in 1794, pulled down, and one of a modern style was erected in its place. Buried in the area were found vast quantities of human bones, and some relics of antiquity.

No borough probably in Britain possesses a political constitution or sett more free and unembarrassed than Rutherglen. It was anciently under the influence of a self-elected magistracy, many of whom lived at a distance from the borough, and who continued long in office without interruption. Negligence on the one hand, and an undue exertion of power on the other, at length excited the burgesses, about the middle of the last century, to apply an effectual remedy to this evil. The community who, at that period, possessed the power of reforming the abuses that had long prevailed in the management of the borough, were much assisted in their exertions by a Mr David Spens town-clerk, a gentleman unbiaffed by false politics, and who was animated with a high degree of true patriotism. Great opposition was at first made to the reform; but the plan adopted by the burgesses was wisely laid, and was prosecuted with unremitting assiduity. They were proof against the influence and bribery of a party that struggled to continue the old practice; and having at length surmounted every difficulty, they formed a new constitution or sett for the borough, which, in 1671, was ap-

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proved of by all the inhabitants of the town, and afterwards inserted in the records of the general convention of the royal boroughs of Scotland.

Rutherglen, in conjunction with Glasgow, Renfrew, and Dumbarton, sends a member to the British parliament. The fairs of this town are generally well attended, and have long been famous for a great show of horses, of the Lanarkshire breed, which are esteemed the best draught-horses in Britain. The inhabitants of this borough still retain some customs of a very remote antiquity. One of these is the making of *Rutherglen four cakes*. The operation is attended with some peculiar rites, which lead us to conclude that the practice is of Pagan origin. An account of these rites is given in *Ure's History of Rutherglen and Kilbride*, p. 94.; from whence we have taken the above account of this place, and which we do not hesitate to recommend to the attention of such of our readers as are fond of natural and local history, being persuaded that they will find it to be both an useful and entertaining performance.

RUTLANDSHIRE, is the least county in England, it being but 40 miles in circumference; in which are two towns, 48 parishes, and 3263 houses. However, for quality it may be compared with any other county; the air being good, and the soil fertile both for tillage and pastures; and it not only affords plenty of corn, but feeds a great number of horned cattle and sheep. It is well watered with brooks and rivulets; and the principal rivers are the Weland and the Wash. It is bounded on the east by Lincolnshire; on the south by the river Weland, which parts it from Northamptonshire; and on the west and north by Leicestershire. It has only two market-towns; namely, Okeham, where the assizes and sessions are held, and Uppingham.

RUYSCH (Frederic), one of the most eminent anatomists of which Holland can boast, was born at the Hague in 1638. After making great progress at home, he repaired to Leyden, and there prosecuted the study of anatomy and botany. He studied next at Francker, where he obtained the degree of doctor of physic. He then returned to the Hague; and marrying in 1661, dedicated his whole time to the study of his profession. In 1665 he published a treatise, entitled *Dilucidatio valvularum de variis lymphaticis et lacteis*; which raised his reputation so high, that he was chosen professor of anatomy at Amsterdam. This honour he accepted with the more pleasure, because his situation at Amsterdam would give him easy access to every requisite help for cultivating anatomy and natural history. After he settled in Amsterdam, he was perpetually engaged in dissecting and in examining with the most inquisitive eye the various parts of the human body. He improved the science of anatomy by new discoveries; in particular, he found out a way to preserve dead bodies many years from putrefaction. His anatomical collection was curious and valuable. He had a series of fœtuses of all sizes, from the length of the little finger to that of a new born infant. He had also bodies of full grown persons of all ages, and a vast number of animals almost of every species on the globe, besides a great many other natural curiosities. Peter the Great of Russia, in his tour through Holland in the year 1698, visited Ruysch, and was so charmed with his conversation, that he

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passed

Rutland-
shire,
Ruysch.

Ruyfch,
Ruyter.

passed whole days with him; and when the hour of departure came, he left him with regret. He set so high a value on Ruyfch's cabinet of curiosities, that when he returned to Holland in 1717, he purchased it for 30,000 florins, and sent it to Petersburg.

In 1685 he was made professor of medicine, an office which he discharged with great ability. In 1728 he got his thigh-bone broken by a fall in his chamber. The year before this misfortune happened he had been deprived of his son Henry, a youth of talents, and well skilled in anatomy and botany. He had been created a doctor of physic, and was supposed to have assisted his father in his discoveries and publications. Ruyfch's family now consisted only of his youngest daughter. This lady had been early inspired with a passion for anatomy, the favourite science of her father and brother, and had studied it with success. She was therefore well qualified to assist her father in forming a second collection of curiosities in natural history and anatomy, which he began to make after the emperor of Russia had purchased the first. Ruyfch is said to have been of so healthy a constitution, that though he lived to the age of 93, yet during that long period he did not labour under the infirmities of disease above a month. From the time he broke his thigh he was indeed disabled from walking without a support; yet he retained his vigour both of mind and body without any sensible alteration, till in 1731 his strength at once deserted him. He died on the 22d of February the same year. His anatomical works are printed in 4 vols 4to.

The style of his writings is simple and concise, but sometimes inaccurate. Instruction, and not ostentation, seems to be his only aim. In anatomy he undoubtedly made many discoveries; but from not being sufficiently conversant in the writings of other anatomists, he published as discoveries what had been known before. The academy of sciences at Paris in 1727 elected him a member in place of Sir Isaac Newton, who was lately deceased. He was also a member of the Royal Society of London.

RUYTER (Michael Adrian), a distinguished naval officer, was born at Fleissingue, a town of Zealand, in 1607. He entered on a sea-faring life when he was only 11 years old, and was first a cabin-boy. While he advanced successively to the rank of mate, master, and captain, he acquitted himself with ability and honour in all these employments. He repulsed the Irish, who attempted to take Dublin out of the hands of the English. He made eight voyages to the West Indies and ten to Brazil. He was then promoted to the rank of rear-admiral, and sent to assist the Portuguese against the Spaniards. When the enemy came in fight, he advanced boldly to meet them, and gave such unquestionable proofs of valour as drew from the Portuguese monarch the warmest applause. His gallantry was still more conspicuous before Salee, a town of Barbary. With one single vessel he sailed through the roads of that place in defiance of five Algerine Corsairs who came to attack him.

In 1653 a squadron of seventy vessels was dispatched against the English under the command of Van Tromp. Ruyter, who accompanied the admiral in this expedition, seconded him with great skill and bravery in the three battles which the English so gloriously won. He was afterwards stationed in the Mediterranean, where

he captured several Turkish vessels. In 1659 he received a commission to join the king of Denmark in his war with the Swedes; and he not only maintained his former reputation, but even raised it higher. As the reward of his services, the king of Denmark ennobled him and gave him a pension. In 1661 he ran ashore a vessel belonging to Tunis, released 40 Christian slaves, made a treaty with the Tunisians, and reduced the Algerine corsairs to submission. His country, as a testimony of her gratitude for such illustrious services, raised him to the rank of vice-admiral and commander in chief. To the latter dignity, the highest that could be conferred upon him, he was well intitled by the signal victory which he obtained over the combined fleets of France and Spain. This battle was fought in 1672 about the time of the conquest of Holland. The fight was maintained between the English and Dutch with the obstinate bravery of nations which were accustomed to dispute the empire of the main. Ruyter having thus made himself master of the sea, conducted a fleet of Indiamen safely into the Texel; thus defending and enriching his country, while it was become the prey of hostile invaders. The next year he had three engagements with the fleets of France and England, in which, if possible, his bravery was still more distinguished than ever. D'Estrees the French vice-admiral wrote to Colbert in these words: "I would purchase with my life the glory of De Ruyter." But he did not long enjoy the triumphs which he had so honourably won. In an engagement with the French fleet off the coast of Sicily, he lost the day, and received a mortal wound, which put an end to his life in a few days. His corpse was carried to Amsterdam, and a magnificent monument was there erected by the command of the states-general. The Spanish council bestowed on him the title of duke, and transmitted a patent investing him with that dignity; but he died before it arrived.

When some person was congratulating Louis XIV. upon De Ruyter's death, telling him he had now got rid of one dangerous enemy; he replied, "Every one must be sorry at the death of so great a man."

RYE, in botany. See **SECALE**.

RYE-Grass. See **AGRICULTURE**, n° 179.

RYE, a town in Suffex, with two markets on Wednesdays and Saturdays, but no fair. It is one of the cinque-ports; is a handsome well-built place, governed by a mayor and jurats, and sends two members to parliament. It has a church built with stone, and a town-hall; and consists of three streets, paved with stone. One side of the town has been walled in, and the other is guarded by the sea. It has two gates, and is a place of considerable trade in the shipping-way. From thence large quantities of corn are exported, and many of the inhabitants are fishermen. It is 34 miles south-east by south of Tunbridge, and 64 on the same point from London. The mouth of the harbour is of late choaked up with sand; but if well-opened, it would be a good station for privateers that cruise against the French. E. Long. o. 50. N. Lat. 51. o.

RYMER (Thomas), Esq; the author of the *Fædera*, was born in the north of England, and educated at the grammar-school of Northallerton. He was admitted a scholar at Cambridge, then became a member of Gray's Inn, and at length was appointed historiographer to King William in place of Mr Shadwell. He wrote A

View

Ruyter
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Rymet.

Rymer
||
Ryots.

View of the Tragedies of the last Age, and afterwards published a tragedy named *Edgar*. For a critic he was certainly not well qualified, for he wanted candour; nor is his judgment much to be relied on, who could condemn Shakespeare with such rigid severity. His tragedy will show, that his talents for poetry were by no means equal to those whose poems he has publicly censured. But though he has no title to the appellation of poet or critic, as an antiquarian and historian his memory will long be preserved. His *Fadera*, which is a collection of all the public transactions, treaties, &c. of the kings of England with foreign princes, is esteemed one of our most authentic and valuable records, and is oftener referred to by the best English historians than perhaps any other book in the language. It was published at London in the beginning of the present century in 17 volumes folio. Three volumes more were added by Sanderfon after Rymer's death. The whole were reprinted at the Hague in 10 vols in 1739. They were abridged by Rapin in French, and inserted in Le Clerc's *Bibliothèque*, a translation of which was made by Stephen Whatley, and printed in 4 vols 8vo, 1731.

Rymer died 14th December 1713, and was buried in the parish church of St Clement's Danes. Some specimens of his poetry are preserved in the first volume of Mr Nichol's Select Collection of Miscellaneous Poems, 1780.

RYNCHOPS, in ornithology, a genus belonging to the order of anseres. The bill is straight; and the superior mandible much shorter than the inferior, which is truncated at the point. The species are two, viz. the *nigra* and *fulva*, both natives of America.

RYOTS, in the policy of Hindostan, the modern name by which the renters of land are distinguished. They hold their possessions by a lease, which may be considered as perpetual, and at a rate fixed by ancient

surveys and valuations. This arrangement has been so long established, and accords so well with the ideas of the natives, concerning the distinction of casts, and the functions allotted to each, that it has been invariably maintained in all the provinces subject either to Mahometans or Europeans; and to both it serves as the basis on which their whole system of finance is founded.

Respecting the precise mode, however, in which the ryots of Hindostan held their possessions, there is much diversity of opinion; the chief of which are very impartially delineated in note iv. to the Appendix of Robertson's Historical Disquisition, &c. concerning India, p. 345. to which we refer such of our readers as are interested in this subject of finance.

RYSCHIA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants; and in the natural method ranking with those that are doubtful. The calyx is pentaphyllous; the corolla is pentapetalous; and the apices turned back, about three times the length of the calyx; the filaments are five, awl-shaped, and shorter than the petals. The seed-vessel is quadrilocular, and contains many seeds. Of this there are two species, viz. the *Glaucifolia* and *Souroubea*.

RYSWICK, a large village in Holland, seated between the Hague and Delft, where the prince of Orange has a palace, which stands about a quarter of a mile farther. It is a very noble structure, all of hewn stone, of great extent in front, but perhaps not proportionably high. It is adorned with a marble stair-case, marble floors, and a magnificent terrace. There is a good prospect of it from the canal between Delft and the Hague. This place is remarkable for a treaty concluded here in 1697 between England, Germany, Holland, France, and Spain. E. Long. 4. 20. N. Lat. 52. 8.

Ryschia,
Ryswick.

S.

S, s, or s, the 18th letter and 14th consonant of our alphabet; the sound of which is formed by driving the breath through a narrow passage between the palate and the tongue elevated near it, together with a motion of the lower jaw and teeth towards the upper, the lips being a little way open; with such a configuration of every part of the mouth and larynx, as renders the voice somewhat sibilous and hissing. Its sound, however, varies; being strong in some words, as *this*, *thus*, &c. and soft in words which have a final *e*, as *mus*, *wise*, &c. It is generally doubled at the end of words, whereby they become hard and harsh, as in *kiss*, *loss*, &c. In some words it is silent, as *isle*, *island*, *viscount*, &c. In writing or printing, the long character *f* is generally used at the beginning and middle of words, but the short *s* at the end.

In abbreviations, *S* stands for *societas* or *socius*; as,

R. S. S. for *regia societatis socius*, i. e. fellow of the royal society. In medicinal prescriptions, *S. A.* signifies *secundum artem*, i. e. according to the rules of art: And in the notes of the ancients, *S* stands for *Sextus*; *S. P.* for *Spurius*; *S. C.* for *senatus consultum*; *S. P. Q. R.* for *senatus populusque Romanus*; *S. S. S.* for *stratum super stratum*, i. e. one layer above another alternately; *S. V. B. E. E. Q. V.* for *si vales bene est, ego quoque valeo*, a form used in Cicero's time, in the beginning of letters. Used as a numeral, *S* anciently denoted seven; in the Italian music, *S* signifies *solo*: And in books of navigation, *S.* stands for south; *S. E.* for south-east; *S. W.* for south-west; *S. S. E.* for south south-east; *S. S. W.* for south south-west &c.

SAAVEDRA (Michael de Cervantes), a celebrated Spanish writer, and the inimitable author of Don Quixote, was born at Madrid in the year 1549. From his

Saavedra. his infancy he was fond of books; but he applied himself wholly to books of entertainment, such as novels and poetry of all kinds, especially Spanish and Italian authors. From Spain he went to Italy, either to serve Cardinal Aquaviva, to whom he was chamberlain at Rome; or else to follow the profession of a soldier, as he did some years under the victorious banners of Marco Antonio Colonna. He was present at the battle of Lepanto, fought in the year 1571; in which he either lost his left hand by the shot of an harquebus, or had it so maimed that he lost the use of it. After this he was taken by the Moors, and carried to Algiers, where he continued a captive five years and a half. Then he returned to Spain, and applied himself to the writing of comedies and tragedies; and he composed several, all of which were well received by the public, and acted with great applause. In the year 1584 he published his *Galatea*, a novel in six books; which he presented to Ascanio Colonna, a man of high rank in the church, as the first fruits of his wit. But the work which has done him the greatest honour, and will immortalize his name, is the history of *Don Quixote*; the first part of which was printed at Madrid in the year 1605. This is a satire upon books of knight-errantry; and the principal, if not the sole, end of it was to destroy the reputation of these books, which had so infatuated the greater part of mankind, especially those of the Spanish nation. This work was universally read; and the most eminent painters, tapestry-workers, engravers, and sculptors, have been employed in representing the history of *Don Quixote*. Cervantes, even in his lifetime, obtained the glory of having his work receive a royal approbation. As King Philip III. was standing in a balcony of his palace at Madrid, and viewing the country, he observed a student on the banks of the river Manzanares reading in a book, and from time to time breaking off and beating his forehead with extraordinary tokens of pleasure and delight: upon which the king said to those about him, "That scholar is either mad, or reading *Don Quixote*:" the latter of which proved to be the case. But *virtus laudatur et alget*: notwithstanding the vast applause his book everywhere met with, he had not interest enough to procure a small pension, but had much ado to keep himself from starving. In the year 1615, he published a second part; to which he was partly moved by the presumption of some scribbler, who had published a continuation of this work the year before. He wrote also several novels; and among the rest, "The Troubles of *Perfiles* and *Sigismunda*." He had employed many years in writing this novel, and finished it but just before his death; for he did not live to see it published. His sickness was of such a nature, that he himself was able to be, and actually was, his own historian. At the end of the preface to the *Troubles of Perfiles and Sigismunda*, he represents himself on horseback upon the road, and a student, who had overtaken him, engaged in conversation with him: "And happening to talk of my illness (says he), the student soon let me know my doom, by saying it was a dropsy I had got; the thirst attending which all the water of the ocean, though it were not salt, would not suffice to quench. Therefore Senor Cervantes, says he, you must drink nothing at all, but do not forget to eat; for this alone will recover you without any other physic. I have been told the same by others, answered I;

but I can no more forbear tipping, than if I were born to do nothing else. My life is drawing to an end; and from the daily journal of my pulse, I shall have finished my course by next Sunday at the farthest.—But adieu, my merry friends all, for I am going to die; and I hope to see you ere long in the other world, as happy as heart can wish." His dropsy increased, and at last proved fatal to him; yet he continued to say and to write bon mots. He received the last sacrament on the 18th of April 1616; yet the day after wrote a Dedication of the *Troubles of Perfiles* and *Sigismunda* to the *Condé de Lemos*. The particular day of his death is not known.

SABA, a Dutch island near St Eustatia in the West Indies. It is a steep rock, on the summit of which is a little ground, very proper for gardening. Frequent rains, which do not lie any time on the soil, give growth to plants of an exquisite flavour, and cabbages of an extraordinary size. Fifty European families, with about one hundred and fifty slaves, here raise cotton, spin it, make stockings of it, and sell them to other colonies for as much as ten crowns* a pair. Throughout America there is no blood so pure as that of Saba; the women there preserve a freshness of complexion, which is not to be found in any other of the Caribbee islands. Happy colony! elevated on the top of a rock between the sky and sea, it enjoys the benefit of both elements without dreading their storms; it breathes a pure air, lives upon vegetables, cultivates a simple commodity, from which it derives ease without the temptation of riches: is employed in labours less troublesome than useful, and possesses in peace all the blessings of moderation, health, beauty, and liberty. This is the temple of peace from whence the philosopher may contemplate at leisure the errors and passions of men, who come, like the waves of the sea, to strike and dash themselves on the rich coasts of America, the spoils and possession of which they are perpetually contending for, and wrestling from each other: hence may he view at a distance the nations of Europe bearing thunder in the midst of the ocean, and burning with the flames of ambition and avarice under the heats of the tropics; devouring gold without ever being satisfied; wading through seas of blood to amass those metals, those pearls, those diamonds, which are used to adorn the oppressors of mankind; loading innumerable ships with those precious casks, which furnish luxury with purple, and from which flow pleasures, effeminacy, cruelty, and debauchery. The tranquil inhabitant of Saba views this mass of follies, and spins his cotton in peace.

SABÆANS. See **SABIANS**.

SABAZIA, in Greek antiquity, were nocturnal mysteries in honour of Jupiter Sabazius. All the initiated had a golden serpent put in at their breasts, and taken out at the lower part of their garments, in memory of Jupiter's ravishing Proserpina in the form of a serpent. There were also other feasts and sacrifices distinguished by this appellation, in honour of Mithras, the deity of the Persians, and of Bacchus, who was thus denominated by the Sabians, a people of Thrace.

SABBATARIANS, or **SEVENTH DAY BAPTISTS**, a sect of anabaptists; thus called, because they observed the Jewish or Saturday-Sabbath, from a persuasion that it was never abrogated in the New Testament by the institution of any other.

SABBATH,

Saba
||
Sabbatar-
rians.

Raynal's
History,
vol. iv.

*L.1:5:0.

Sabbath.

Definition.

SABBATH, in the Hebrew language, signifies *rest*. The seventh day was denominated the *Sabbath*, or *day of rest*, because that in it God had rested from all his works which he created and made. From that time the seventh day seems to have been set apart for religious services; and, in consequence of a particular injunction, was afterwards observed by the Hebrews as an holyday. They were commanded to set it apart for sacred purposes in honour of the creation, and likewise in memorial of their own redemption from Egyptian bondage.

Importance
of the insti-
tution and
early cere-
monies.

The importance of the institution may be gathered from the different laws respecting it. When the ten commandments were published from Mount Sinai in tremendous pomp, the law of the Sabbath held a place in what is commonly called the first table, and by subsequent statutes the violation of it was to be punished with death. Six days were allowed for the use and service of man; but the seventh day God reserved to himself, and appointed it to be observed as a stated time for holy offices, and to be spent in the duties of piety and devotion. On this day the ministers of the temple entered upon their week; and those who had attended on the temple service the preceding week went out at the same time. New loaves of shew-bread were placed upon the golden table, and the old ones taken away. Two lambs for a burnt-offering, with a certain proportion of fine flour, mingled with oil, for a bread-offering, and wine for a libation, were offered. The Sabbath, as all other festivals, was celebrated from evening to evening. It began at six in the evening on Friday, and ended at the same time the next day.

Time of its
institution.

Concerning the time at which the Sabbath was first instituted, different opinions have been held. Some have maintained, that the sanctification of the seventh day, mentioned in Gen. ii. is only there spoken of *δια προλήψεως* or by anticipation; and is to be understood of the Sabbath afterwards enjoined the children of Israel at the commencement of the Mosaic dispensation. But without entering into a particular examination of all the arguments adduced to support this opinion, a few observations, it is presumed, will be sufficient to show that it rests on no solid foundation.

It cannot easily be supposed that the inspired penman would have mentioned the sanctification of the seventh day amongst the primeval transactions, if such sanctification had not taken place until 2500 years afterwards. Writers, ambitious of that artificial elegance which the rules of criticism have established, often bring together in their narratives events which were themselves far distant, for the sake of giving form to their discourse; but Moses appears to have despised all such flimsy refinements, and to have constructed his narrative in great conformity to the series of events.

Religious
service in
the patri-
archal age.

From the accounts we have of the religious service practised in the patriarchal age, it appears that, immediately after the fall, when Adam was restored to favour through a Mediator, a stated form of public worship was instituted, which man was required to observe in testimony, not only of his dependence on the Creator, but also of his *faith* and *hope* in the promise made to our first parents, and seen afar off. Of an institution then so grand and important, no circumstance would be omitted that is necessary to preserve it, or that contributes to render the observance of it regular and solemn.

That determined times are necessary for the due celebration of divine service, cannot be denied. Such is the constitution of man, that he must have particular times set apart for particular services. He is doomed to toil and labour; to earn his bread in the sweat of his face; and is capable of performing religious duties only in such a manner as is consistent with his situation in the world. If stated times for religious solemnities had not been enjoined, the consequence would have been, that such solemnities would have been altogether neglected; for experience shows, that if mankind were left at liberty when and how often they should perform religious offices, these offices would not be performed at all. It is the observation of holy times that preserves the practice of holy services; and without the frequent and regular returns of hallowed days, man would quickly forget the duty which he owes to God, and in a short time no vestige of religion would be found in the world.

Among the ordinances which God vouchsafed his ancient people, we find that the pious observation of holydays was particularly insisted upon; and the Sabbath was enjoined to be kept holy, in the most solemn manner, and under the severest penalties. Can it then be supposed that He would suffer mankind, from the creation of the world to the Mosaic era, to remain without an institution so expedient in itself, and as well fitted to answer the end proposed by it, under the one dispensation, as ever it could be under the other? No; we have every imaginable reason to conclude, that when religious services were enjoined, religious times were appointed also; for the one necessarily implies the other.

It is no objection to the early institution of the Sabbath, that there is no mention of it in the history of the patriarchal age. It would have swelled the Bible to a most enormous size, had the sacred historian given a particular account of all the transactions of those times; besides, it would have answered no end. When Moses wrote the book of Genesis, it was unnecessary to relate minutely transactions and institutions already well known by tradition: accordingly we see, that his narrative is everywhere very concise, and calculated only to preserve the memory of the most important facts. However, if we take a view of the church-service of the patriarchal age, we shall find that what is called the *legal* dispensation, at least the liturgic part of it, was no new system, but a collection of institutions observed from the beginning, and republished in form by Moses. The Scriptures inform us that Cain and Abel offered sacrifices; and the account which is given of the acceptance of the one, and the rejection of the other, evidently shows that stated laws respecting the service had then taken place. "In process of time," *at the end of the days*, "Abel brought an offering." Here was *priest, altar, matter of sacrifice, appointed time, motive to sacrifice, atonement made, and accepted*. The distinction of animals into clean and unclean before the flood, and Noah's sacrifice immediately after his deliverance, without any new direction, is an unanswerable proof of the same truth. It is testified of Abraham, by God himself, that he kept his *charge*, his *commandments*, his *statutes*, and his *laws*. These expressions comprehend the various branches, into which the law given at Sinai was divided. They contain the moral precepts, affirmative and negative, the matter of religious service, a body of laws.

Sabbath.

Necessity
of stated
days for
the per-
formance.

6

Objections
to the ear-
ly institu-
tion of the
Sabbath
considered.

Sabbath. laws to direct obedience, and to which man was to conform his conduct in every part of duty. Agreeably to this, we find that sacrifices were offered, altars and places of worship consecrated, and the *Sabbath* also mentioned as a well known solemnity, before the promulgation of the law. It is expressly taken notice of at the fall of manna; and the incidental manner in which it is then mentioned, is a convincing proof that the Israelites were no strangers to the institution: for had it been a *new* one, it must have been enjoined in a positive and particular manner, and the nature of it must have been laid open and explained, otherwise the term would have conveyed no meaning.

7
Argument
from the
general di-
vision of
time into
weeks.
* *שבוע*
Seven.

The division of time into *weeks*, or periods of seven days, which obtained so early and almost universally, is a strong indication that *one* day in seven was always distinguished in a particular manner. *Week**, and *seven days*, are in scripture language synonymous terms. God commanded Noah, *seven days* before he entered the ark, to introduce into it all sorts of living creatures. When the waters of the flood began to abate, Noah sent forth a dove, which, finding no rest for the sole of her foot, returned to him. After *seven days* he sent forth the dove a second time, and again she returned to the ark. At the expiration of other *seven days* he let go the dove a third time: and a *week* is spoken of (Gen. xxix.) as a well known space of time.

This septenary division of time has been, from the earliest ages, uniformly observed over all the eastern world. The Israelites, Assyrians, Egyptians, Indians, Arabians, and Persians, have always made use of a week, consisting of seven days. Many vain attempts have been made to account for this uniformity; but a practice so general and prevalent could never have taken place, had not the septenary distribution of time been instituted from the beginning, and handed down by tradition.

From the same source also must the ancient heathens have derived their notions of the sacredness of the seventh day. That they had such notions of it is evident from several passages of the Greek poets quoted by Aristobolus, a learned Jew, by Clement of Alexandria, and Eusebius.

ἡ ἑβδόμη, ἡ ἡμέρα ἡμῶν. Hesiod.
The seventh, the *sacred* day.

Ἐβδόμητι δ' ἡμέρῃ κατέλυθεν, ἡμεῖς ἡμῶν. Homer.
Afterwards came the seventh, the *sacred* day.

Again:

Ἐβδόμον ἡμέραν. καὶ τὰ τέλει αὐτῆς πάντα.
On the *seventh* day all things were *completed*.

Ἐβδόμητι δ' οἱ τέλει αὐτῆς πάντα τέλειται. Liris.
All things were made *perfect* on the *seventh* day.

That they likewise held the number *seven* in high estimation has been shown by a learned, though sometimes fanciful, author*, with such evidence as to enforce conviction. The Pythagoreans call it the *venerable* number, *σεβαστὴ ἀριθμὸς*, *worthy of veneration* and held it to be *perfect* and *most proper* to religion. They denominated it *fortune*, and also styled it *voice*, *sound*, *muse*, because, no doubt, *seven* distinct notes comprehend the whole scale of music, beyond which neither voice nor instrument can go, but must return from the seventh, and begin again anew. They likewise designed it *τελευτὸς*, *leading to the end*.

* *Holloway's Originals*,
vol. ii.
p. 60.

Sabbath. *Seven*, in the Hebrew language, is expressed by a word that primarily signifies *fulness*, *completion*, *sufficiency*, and is applied to a *week*, or *seven days*, because that was the *full* time employed in the work of creation; to the *Sabbath*, because on it all things were *completed*; and to an *oath*, because it is *sufficient* to put an end to all strife. This opening of the Hebrew root will enable us to come at the meaning of those expressions of the heathens, and also let us see whence they derived their ideas and modes of speaking, and that the knowledge of the transactions at the creation, though much perverted, was never entirely lost by them.

It has been supposed by some, that the heathens borrowed the notion of the *sacredness* of the seventh day from the Jews. But this opinion will not readily be admitted, when it is considered that the Jews were held in the greatest contempt by the surrounding nations, who derided them no less for their sabbaths than for their circumcision. All sorts of writers ridiculed them on this account. Seneca charged them with spending the seventh part of their time in sloth. Tacitus said, that not only the seventh day, but also the seventh year, was unprofitably wasted. Juvenal brings forward the same charge; and Persius upbraided them with their *recutita sabbata*. Plutarch said that they kept it in honour of Bacchus. Tacitus affirmed, that it was in honour of Saturn; but the most abominable assertion of all is that of Apion, who said that they observed the Sabbath in memory of their being cured on that day of a shameful disease, called by the Egyptians *sabba*.

Some perceiving the force of this objection have contended, that time was divided into weeks of seven days, that each of the planetary gods, the Sun, Moon, Mercury, Venus, Mars, Jupiter, and Saturn, who were the *Dii majorum gentium*, might have a day appropriated to his service. But if such was the origin of weeks, how came the great and ancient goddess *Tellus* to be omitted? She was worshipped by the early idolaters as well as the other planets, and must surely have been deemed by them as worthy of a particular day set apart to her honour as the planet Saturn, who was long undiscovered, afterwards seen but occasionally, and at all times considered as of malign aspect. (See REMPHAN)

Others have supposed, that as the year was divided into lunar months of something more than 28 days, it was natural to divide the month into quarters from the different phases of the moon, which would produce as many weeks of seven days. But this supposition is less tenable than the former. The phases of the moon are not so precisely marked at the quarters as to attract to them any particular notice, nor are the quarterly appearances of one month commonly like those of another. We cannot, therefore, conceive what should have induced the earliest observers of the phases of the moon to divide the month into four parts rather than into three, or five, or seven. Had the ancient week consisted of 14 days, it might have been inferred, with some degree of plausibility, that its length was regulated by the phases of the moon, because the shape of that luminary, at the end of the second quarter, is very precisely marked; but there is nothing which, in the present hypothesis, could have everywhere led mankind to make their weeks consist of seven days. This division of time, therefore, can be accounted for only by admitting the primeval institution

Sabbath.

8
Strict man-
ner in
which the
ancient
Jews ob-
served the
Sabbath.

stitution of the Sabbath, as related by Moses in the book of Genesis. That institution was absolutely necessary to preserve among men a sense of religion; and it was renewed to the Jews at the giving of the law, and its observance enforced by the severest penalties. It was accordingly observed by them with more or less strictness in every period of their commonwealth, and there is none of the institutions of their divine lawgiver which, in their present state of dispersion, they more highly honour. They regard it, indeed, with a superstitious reverence, call it their *spouse*, their *delight*, and speak of it in the most magnificent terms. They have often varied in their opinions of the manner in which it ought to be kept. In the time of the Maccabees, they carried their respect for the sabbath so very high, that they would not on that day defend themselves from the attacks of their enemies. But afterwards they did not scruple to stand upon their necessary defence, although they would do nothing to prevent the enemy from carrying on their operations. When our Saviour was on earth, it was no sin to loose a beast from the stall, and lead him to water; and if he had chanced to fall into a ditch, they pulled him out: but now it is absolutely unlawful to give a creature in that situation any other assistance than that of food; and if they lead an animal to water, they must take care not to let the bridle or halter hang loose, otherwise they are transgressors.

9
Mode of
observing
it among
the modern
Jews.

As the law enjoins rest on that day from all servile employments, in order to comply with the injunction, they undertake no kind of work on Friday but such as can easily be accomplished before evening. In the afternoon they put into proper places the meat that they have prepared to eat the day following. They afterwards set out a table covered with a clean cloth, and place bread upon it, which they also cover with another cloth; and during the sabbath the table is never moved out of its place. About an hour before sunset, the women light the sabbath lamps, which hang in the places where they eat. They then stretch forth their hands to the light, and pronounce the following benediction. "Blessed be thou, O God, king of the world, who hast enjoined us, that are sanctified by thy commandments, to light the sabbath lamp." These lamps are two or more in number, according to the size of the chamber in which they are suspended, and continue to burn during the greatest part of the night. In order to begin the sabbath well, they wash their hands and faces, trim their hair, and pare their nails, beginning at the fourth finger, then going to the second, then the fifth, then the third, and ending with the thumb. If a Jew casts the parings of his nails to the ground, he is *rascab*, that is, a wicked man; for Satan has great power over those parings of nails; and it seems they are of great use to the wizzards, who know how to employ them in their enchantments. If he buries them in the earth, he is *tzedic*, that is, a just man: if he burns them in the fire, he is *chesid*, that is, worthy of honour, an holy man. When they have performed these preparatory ceremonies, they repair to the synagogue, and enter upon their devotions. As soon as prayers begin, the departed souls spring out of the purgatorial flames, and have liberty to cool themselves in water while the sabbath lasts; for which reason the Jews prolong the continuance of it as much as they can; and the Rabbins have strictly commanded them not to exhaust

Sabbath.

all the water on the sabbath day, lest those miserable souls should by that means be deprived of the refreshing element. When they have ended their prayers, they return home, and salute one another, by wishing a good sabbath. They then sit down to table. The master of the family takes a cup full of wine, and lifting up his hand, says, "Blessed be thou, O God our Lord, king of the world, who hast created the fruit of the vine.—Blessed be thou, O God our Lord, king of the world, who hast sanctified us by thy commandments, and given us thy holy sabbath; and of thy good will and pleasure hast left it to us an inheritance, the memorial of thy works of creation. For it is the beginning of the congregation of saints, and the memorial of the coming out of Egypt. And thou hast also chosen us from all other people, and sanctified us, and with love and pleasure hast left thy holy sabbath an inheritance. Blessed be thou, O God, who sanctifiest the sabbath." After this benediction is ended, he drinks, and gives the cup to all that are present. He then removes the cloth, and taking bread, says, "Blessed be thou, O God our Lord, king of the world, who bringest bread out of the earth." Then he breaks off a bit, and eats, and also gives a piece of it to every one of the company.

On the morning of the sabbath, the Jews do not rise so early as they do at other times. Thinking, the greater pleasure they take on that day, the more devoutly they keep it. When they come into the synagogue, they pray as usual, only the devotions are somewhat longer, being intermingled with psalmody, in honour of the sabbath. The Pentateuch is then produced, and seven sections of it are read in order by seven persons chosen for the purpose. Several lessons are likewise read out of the prophets, which have some relation to what was read out of the law. After morning prayers they return to their houses, and eat the second sabbath-meal, shewing every token of joy, in honour of the festival. But if one has seen any thing ominous in his sleep; if he has dreamed that he burnt the book of the law; that a beam has come out of the walls of his house; that his teeth have fallen out;—then he fasts until very late at night, for all such dreams are bad ones. In the afternoon they go again to the synagogue, and perform the evening service, adding to the ordinary prayers some lessons that respect the sabbath. When the devotional duties are ended, they return home, and light a candle resembling a torch, and again sit down to eat. They remain eating until near six, and then the master of the family takes a cup, and pouring wine into it rehearses some benedictions; after which he pours a little of the wine upon the ground, and says, "Blessed be thou, O Lord, King of the world, who hast created the fruit of the vine." Then holding the cup in his left hand, with the right he takes a box of sweet spices, and says, "Blessed be thou, O Lord God, who hast created various kinds of sweet spices." He smells the spices, and holds them out to the rest, that they may do the same. He then takes the cup in his right hand, and going to the candle views the left very narrowly, and pronounces a blessing. With the cup in the left hand, he examines the right in the same manner. Again, holding the cup in his right hand, he rehearses another benediction, and at the same time pours some of the wine on the ground. After this he drinks a little of it, and then hands it about to the rest of the family, who finish what

Sabbath.

what remains. In this manner the sabbath is ended by the Jews, and they may return to their ordinary employments. Those who meet pay their compliments, by wishing one another a happy week.

10
Prohibi-
tions ob-
served.

The Rabbins have reckoned up nine and thirty primary prohibitions, which ought to be observed on the sabbatic festival; but their circumstances and dependents, which are also obligatory, are almost innumerable. The 39 articles are, Not to till the ground; to sow; to reap; to make hay; to bind up sheaves of corn; to thresh; to winnow; to grind; to sift meal; to knead the dough; to bake; to shear; to whiten; to comb or card wool; to spin; to twine or twist; to warp; to dye; to tie; to untie; to sew; to tear or pull in pieces; to build; to pull down; to beat with a hammer; to hunt or fish; to kill a beast; to flay it; to dress it; to scrape the skin; to tan it; to cut leather; to write; to scratch out; to rule paper for writing; to kindle a fire; to extinguish it; to carry a thing from place to place; to expose any thing to sale. These are the primary prohibitions, and each of these has its proper consequences, which amount to an incredible number; and the Jews themselves say, that if they could keep but two sabbaths as they ought, they would soon be delivered out of all their troubles.

If a Jew on a journey is overtaken by the sabbath in a wood, or on the highway, no matter where, nor under what circumstances, he sits down; he will not stir out of the spot. If he falls down in the dirt, he lies there; he will not rise up. If he should tumble into a privy, he would rest there; he would not be taken out (A). If he sees a flea skipping upon his clothes, he must not catch it. If it bites him, he may only remove it with his hand; he must not kill it; but a louse meets with no such indulgence, for it may be destroyed. He must not wipe his hands with a towel or cloth, but he may do it very lawfully with a cow's tail. A fresh wound must not be bound up on the sabbath-day; a plaster that had been formerly applied to a sore may remain on it; but if it falls off, it must not be put on anew. The lame may use a staff, but the blind must not. These particulars, and a great many more of the same nature, are observed by the Jews in the strictest manner. But if any one wishes to know more of the practice of that devoted race, he may consult Buxtorf's *Judaica Synagoga*, chap. x. xi. where he will find a complete detail of their customs and ceremonies on the sabbath; and likewise see the primary prohibitions branched out into their respective circumstances.

11
Institution
of Sunday
or the
Lord's
day.

As the seventh day was observed by the Jewish church, in memory of the rest of God after the works of creation, and their own deliverance from Pharaoh's tyranny; so the first day of the week has always been observed by the Christian church, in memory of the resurrection of Jesus Christ, by which he completed the work of man's redemption on earth, and rescued him from the dominion of him who has the power of death.

This day was denominated by the primitive Christians the *Lord's day*. It was also sometimes called *Sunday*; which was the name given to it by the heathens, who dedicated it to the sun. And indeed, although it was originally called *Sunday* by the heathens, yet it may very properly retain that name among Christians, because it is dedicated to the honour of "The true light," which lighteth every man that cometh into the world, of Him who is styled by the prophet "The Sun of righteousness," and who on this day arose from the dead. But although it was, in the primitive times, indifferently called the *Lord's day* or *Sunday*, yet it was never denominated the *sabbath*; a name constantly appropriated to Saturday, or the *seventh* day, both by sacred and ecclesiastical writers.

Of the change from the *seventh* to the *first* day of the week, or even of the institution of the *Lord's day* festival, there is no account in the New Testament. However, it may be fairly inferred from it, that the first day of the week was, in the apostolic age, a stated time for public worship. On this day the apostles were assembled, when the Holy Ghost came down so visibly upon them to qualify them for the conversion of the world. On this day we find St Paul preaching at Troas, when the disciples came to break bread: and the directions which the same apostle gives to the Corinthians concerning their contributions for the relief of their suffering brethren, plainly allude to their religious assemblies on the first day of the week.

Thus it would appear from several passages in the New Testament, that the religious observation of the first day of the week is of apostolical appointment; and may indeed be very reasonably supposed to be among those directions and instructions which our blessed Lord himself gave to his disciples, during the 40 days between his resurrection and ascension, wherein he conversed with them, and spoke of the things pertaining to the kingdom of God. Still, however, it must be owned that those passages, although the plainest that occur, are not sufficient to prove the apostolical institution of the *Lord's day*, or even the actual observation of it. In order, therefore, to place the matter beyond all controversy, recourse must be had to ecclesiastical testimony.

From the consentient evidence and uniform practice of the primitive church, and also from the attestation of Pliny, an heathen of no mean figure both in learning and power, we find that the first day of the week was observed in the earliest ages as an holyday or festival, in honour of the resurrection of Christ. Now there are but two sources whence the custom could possibly have arisen. It must have been instituted either by *human* or *divine* authority: by human authority it was not instituted; for there was no general council in those early times, and without the decree of a general council it was impossible that any ecclesiastical institution could have been universally established at once. It re-

13
But never-
theless it
appears to
be of di-
vine ori-
gin.

(A) This, it seems, was once really the case. A Jew of Magdeburg fell into a privy on a Saturday. He might have been taken out; but he told those who offered him their assistance to give themselves no trouble, for there he was determined to keep holy the sabbath day. The bishop, when he heard of it, resolved that he should sanctify the next day also in the same place; and so, betwixt them, the poor Jew lost his life.

Sabbath. divine authority: and that it really was so, will farther appear from the following considerations. It is certain that the apostles travelled over the greatest part of the world, and planted churches in the remotest parts of it. It is certain also that they were all led by the same *spirit*; and their desire was, that unity and uniformity should be observed in all the churches which they had founded. It is not therefore surprising that, in the primitive times, the same doctrine, the same worship, the same rites and customs, should prevail all over the Christian world; nay, it would have been unaccountable had the case been otherwise. For this reason we may conclude that every custom, universally observed in the early ages of the Christian church, and not instituted by a general council, was of original appointment.

14
Purpose for which the Lord's day was instituted.

As the *Lord's day* is sanctified, that is, *set apart* to Christians for the worship and service of God, their Creator, Redeemer, and Sanctifier, a little consideration will easily discover how it ought to be observed. Although a day separated from worldly business, yet it is in no sense a day of idleness, but a season appropriated to the works of salvation and labours of charity.

15
How it was observed in the primitive times.

In the primitive times this holy day was observed in the most solemn manner. From the monuments of those early ages we learn, that it was spent in a due and constant attendance on all the offices of divine worship. On it they held their religious assemblies, in which the writings of the apostles and prophets were read to the people, and the doctrines of Christianity further pressed upon them by the exhortations of the clergy. Solemn prayers and praises were offered up to God, and hymns sung in honour of Christ; the Lord's supper was constantly celebrated; and collections were made for the maintenance of the clergy and the relief of the poor. On this day they abstained, as much as they could, from bodily labour. They looked upon it as a day of joy and gladness; and therefore all fasting on it was prohibited, even during the season of lent, their great annual fast.—Such was the zeal of those times, that nothing, no not the severest persecutions, hindered them from celebrating holy offices on this day. They were often beset and betrayed, and as often slaughtered in consequence of cruel edicts from emperors, those very emperors for whose happiness and prosperity they always offered up their fervent prayers. For this cause, when they could not meet in the day-time, they assembled in the morning before it was light; and when sick, in exile, or in prison, nothing troubled them more than that they could not attend the service of the church. No trivial pretences were then admitted for any one's absence from public worship; for severe censures were passed upon all who were absent without some urgent necessity. When the empire became Christian, Constantine and his successors made laws for the more solemn observation of the Lord's day. They prohibited all prosecutions and pleadings and other juridical matters to be transacted on it, and also all unnecessary labour; not that it was looked upon as a Jewish sabbath, but because these things were considered as inconsistent with the duties of the festival.

But although the primitive Christians did not indulge themselves in the practice of unnecessary labour or trifling amusements, yet they did not wholly abstain from working, if great necessity required it. The

council of *Laodicea* enjoined that men should abstain from work on the Lord's day *if possible*; but if any were found to *judaize*, they were to be censured as great transgressors. So circumspect were the primitive Christians about their conduct on this festival, that on the one hand they avoided all things which tended to profane it, whilst on the other they censured all those who insisted it should be observed with Pharisaical rigour.

The primary duty of the Lord's day is *public worship*. The nature and design of the Christian religion sufficiently shows the necessity and importance of assembling for the duties of devotion. The whole scope of Christianity is to bring us to an union with God, which cannot be obtained or preserved without frequent communications with him; and the reasons which show religious intercourse to be the indispensable duty of Christians in a private capacity, will bind it with equal or more force on them considered as a community.

16
Advantages resulting from the observation of

The advantages of public worship, when duly performed, are many and great. There are two, however, which deserve to be considered in a particular manner. It gives Christians an opportunity of openly professing their faith, and testifying their obedience to their Redeemer in the wisest and best manner; and in an age when atheism has arisen to an alarming height, when the Son of God is crucified afresh, and put to open shame, every man, who has any regard for religion, will cheerfully embrace all opportunities of declaring his abhorrence of the vicious courses pursued by those degenerate apostates. He will with pleasure lay hold on every occasion to testify that he is neither afraid nor ashamed to confess the truth; and will think it his indispensable duty openly to disavow the sins of others, that he may not incur the guilt of partaking of them.

Public worship preserves in the minds of men a sense of religion, without which society could not exist. Nothing can keep a body of men together and unite them in promoting the public good, but such principles of action as may reach and govern the heart. But these can be derived only from a sense of religious duties, which can never be so strongly impressed upon the mind as by a constant attendance upon public worship. Nothing can be more weak than to neglect the public worship of God, under the pretence that we can employ ourselves as acceptably to our Maker at home in our closets. Both kinds of worship are indeed necessary; but one debt cannot be paid by the discharge of another. By public worship every man professes his belief in that God whom he adores, and appeals to Him for his sincerity, of which his neighbour cannot judge. By this appeal he endears himself more or less to others. It creates confidence; it roots in the heart benevolence, and all other Christian virtues, which produce, in common life, the fruits of mutual love and general peace.

People in general are of opinion that the duties of the Lord's day are over when public worship is ended. But they seem to forget for what purposes the day was set apart. It is not only appropriated to the duties of public worship, but also sanctified to our improvement in the knowledge of the doctrines of Christianity. It is an institution calculated to alleviate the condition of the laborious classes of mankind, and, in

consequence

Sabbath. consequence of that, to afford rest to *beasts* also. It is proper, it is necessary, that man should reflect on his condition in the world, that he should examine the state of his soul, and inquire what progress he has made in that work which was given him to do. Those that have children or servants are obliged to look after *their* instruction as well as their own. These are the ends which the institution of Sunday was designed to answer. Every man must allow that these things must be done at some time or other; but unless there be *set* times for doing them, the generality of mankind would wholly neglect them.

Visiting and *travelling* (though very common) are enormous profanations of this holy day. Families are thereby robbed of their *time*; a loss for which no amends can ever be made them: Servants, instead of having leisure to improve themselves in spiritual knowledge, are burdened with additional labour: And in a man of any humanity, it must excite many painful sensations, when he reflects how often the useful horse on that day experiences all the anguish of hunger, torn sides, and battered knees. Every kind of *amusement*, every kind of *common* labour, is an encroachment on the particular duties of the Lord's day; and consequently men profane the day by spending it in any amusements, or undertaking upon it any ordinary employment unless it be a work of absolute necessity.

SABBATH-Breaking, or profanation of the Lord's day, is punished by the municipal laws of England. For, besides the notorious indecency and scandal of permitting any secular business to be publicly transacted on that day in a country professing Christianity, and the corruption of morals which usually follows its profanation, the keeping one day in seven holy, as a time of relaxation and refreshment, as well as for public worship, is of admirable service to a state, considered merely as a civil institution. It humanizes, by the help of conversation and society, the manners of the lower classes; which would otherwise degenerate into a sordid ferocity and savage selfishness of spirit: it enables the industrious workman to pursue his occupation in the ensuing week with health and cheerfulness: it imprints on the minds of the people that sense of their duty to God so necessary to make them good citizens; but which yet would be worn out and defaced by an unremitted continuance of labour, without any stated times of recalling them to the worship of their Maker. And therefore the laws of King Athelstan forbade all merchandizing on the Lord's day, under very severe penalties. And by the statute 27 Hen. VI. c. 5. no fair or market shall be held on the principal festivals, Good-friday, or any Sunday (except the four Sundays in harvest), on pain of forfeiting the goods exposed to sale. And, since, by the statute 1 Car. I. c. 1. no persons shall assemble, out of their own parishes, for any sport whatsoever, upon this day; nor, in their parishes, shall use any bull or bear beating, interludes, plays, or other unlawful exercises or pastimes; on pain that every offender shall pay 3s. 4d. to the poor. This statute does not prohibit, but rather impliedly allows, any innocent recreation or amusement, within their respective parishes, even on the Lord's day, after divine service is over. But by statute 29 Car. II. c. 7. no person is allowed to work on the Lord's day, or use any boat or barge, or expose any goods to sale, except meat in

public houses, milk at certain hours, and works of necessity or charity, on forfeiture of 5 s. Nor shall any drover, carrier, or the like, travel upon that day, under pain of 20 s. Sabellians
||
Sable.

SABELLIANS, a sect of Christians of the 3d century, that embraced the opinions of Sabellius, a philosopher of Egypt, who openly taught that there is but one person in the Godhead.

The Sabellians maintained, that the Word and the Holy Spirit are only virtues, emanations, or functions of the Deity; and held, that he who is in heaven is the Father of all things, that he descended into the virgin, became a child, and was born of her as a son; and that having accomplished the mystery of our salvation, he diffused himself on the apostles in tongues of fire, and was then denominated the *Holy Ghost*. This they explained by resembling God to the sun, the illuminative virtue or quality of which was the Word, and its warming virtue the Holy Spirit. The Word, they taught, was darted, like a divine ray, to accomplish the work of redemption; and that being re-ascended to heaven, the influences of the Father were communicated after a like manner to the apostles.

SABIANS, an early sect of idolaters, which continues to this day, and worships the sun, moon, and stars. See **POLYTHEISM**, n° 10, 11, 12.

SABINA, a province of Italy, in the territories of the church; bounded on the north by Umbria, on the east by Farther Abruzzo, on the south by the Campagna of Rome, and on the west by the patrimony of St Peter. It is 22 miles in length, and almost as much in breadth; watered by several small rivers, and abounding in oil and wine. There is no walled town in it, and Magliano is the principal place.

SABINUS (George), a celebrated Latin poet, born in the electorate of Brandenburg in 1508. His poem *Res gestæ Caesarum Germanorum*, spread his reputation all over Germany, and procured him the patronage of all the princes who had any regard for polite literature: he was made professor of the belles lettres at Frankfort on the Oder, rector of the new academy of Königsburg, and counsellor to the elector of Brandenburg. He married two wives, the first of which was the eldest daughter of the famous reformer Melancthon; and died in 1560. His poems are well known, and have been often printed.

SABLE, or *SABLE Animal*, in zoology, a creature of the weasel-kind, called by authors *mustela zibellina*. See **MUSTELA**, n° 6.

The chase of these animals, in the more barbarous times of the Russian empire, was the employ, or rather task, of the unhappy exiles in Siberia. As that country is now become more populous, the fables have in a great measure quitted it, and retired farther north and east, to live in desert forests and mountains: they live near the banks of rivers, or in the little islands in them; on this account they have, by some, been supposed to be the *Sabæior* of Aristotle (*Hist. An. lib. viii. c. 5.*), which he classes with the animals conversant among waters.

At present the hunters of fables form themselves into troops, from five to 40 each: the last subdivide into lesser parties, and each chooses a leader; but there is one that directs the whole: a small covered boat is provided for each party, loaded with provisions, a dog and

Sable.

and net for every two men, and a vessel to bake their bread in: each party also has an interpreter for the country they penetrate into. Every party then sets out according to the course their chief points out: they go against the stream of the rivers, drawing their boats up, till they arrive in the hunting country; there they stop, build huts, and wait till the waters are frozen, and the season commences: before they begin the chase, their leader assembles them, they unite in a prayer to the Almighty for success, and then separate: the first sable they take is called *God's sable*, and is dedicated to the church.

They then penetrate into the woods; mark the trees as they advance, that they may know their way back; and in their hunting-quarters form huts of trees, and bank up the snow round them: near these they lay their traps; then advance farther, and lay more traps, still building new huts in every quarter, and return successively to every old one to visit the traps and take out the game to skin it, which none but the chief of the party must do: during this time they are supplied with provisions by persons who are employed to bring it on sledges, from the places on the road, where they are obliged to form magazines, by reason of the impracticability of bringing quantities through the rough country they must pass. The traps are a sort of pit-fall, with a loose board placed over it, baited with fish or flesh: when sables grow scarce, the hunters trace them in the new-fallen snow to their holes; place their nets at the entrance; and sometimes wait, watching two or three days for the coming out of the animal: it has happened that these poor people have, by the failure of their provisions, been so pinched with hunger, that, to prevent the cravings of appetite, they have been reduced to take two thin boards, one of which they applied to the pit of the stomach, the other to the back, drawing them tight together by cords placed at the ends: such are the hardships our fellow-creatures undergo to supply the wantonness of luxury.

The season of chase being finished, the hunters re-assemble, make a report to their leader of the number of sables each has taken; make complaints of offenders against their regulations; punish delinquents; share the booty; then continue at the head-quarters till the rivers are clear of ice; return home, and give to every church the dedicated furs.

SABLE Cape, the most southerly province of Nova Scotia, in North America, near which is a fine cod-fishery. W. Long. 65. 34. N. Lat. 43. 24.

Sable Isle is adjoined to this cape, and the coasts of both are most commodiously situated for fisheries.

SABLE Trade, the trade carried on in the skins or furs of sables; of which the following commercial history was translated by Mr J. R. Forster from a Russian performance on that subject by Mr Muller.

"*Sable*, *soble*, in Russian; *zobel* in German. Their price varies from 1 l. to 10 l. Sterling, and above: fine and middling sable-skins are without bellies, and the coarse ones are with them. Forty skins make a collection called *zimmer*. The finest sables are sold in pairs perfectly similar, and are dearer than single ones of the same goodness; for the Russians want those in pairs for facing caps, cloaks, tippets, &c. the blackest are reputed the best. Sables are in season from November

to February; for those caught at any other time of the year are short-haired, and then called *nedosoboli*. The hair of sables differs in length and quality: the long hairs, which reach far beyond the inferior ones, are called *os*; the more a skin has of such long hairs, the blacker it is, and the more valuable is the fur; the very best have no other but those long and black hairs. *Motchka* is a technical term used in the Russian fur-trade, expressing the lower part of the long hairs; and sometimes it comprehends likewise the lower and shorter hairs: the above-mentioned best sable furs are said to have a black *motchka*. Below the long hairs are, in the greater part of the sable-furs, some shorter hairs, called *podosie*, i. e. under-os; the more *podosie* a fur has, it is the less valuable: in the better kind of sables the *podosie* has black tips, and a grey or rusty *motchka*. The first kind of *motchka* makes the middling kind of sable furs; the red one the worst, especially if it has but few *os*. Between the *os* and *podosie* is a low woolly kind of hair, called *podfada*. The more *podfada* a fur has, the less valuable: for the long hair will, in such case, take no other direction than the natural one; for the characters of sable is, that notwithstanding the hair naturally lies from the head towards the tail, yet it will lie equally in any direction as you strike your hand over it. The various combinations of these characters, in regard to *os*, *motchka*, *podosie*, and *podfada*, make many special divisions in the goodness of furs: besides this, the furriers attend to the size, preferring always, *ceteris paribus*, the biggest, and those that have the greatest gloss. The size depends upon the animal being a male or a female, the latter being always smaller. The gloss vanishes in old furs: the fresh ones have a kind of bloomy appearance, as they express it; the old ones are said to have done blooming: the dyed sables always lose their gloss; become less uniform, whether the lower hairs have taken the dye or not; and commonly the hairs are somewhat twisted or crisped, and not so straight as in the natural ones. Some fumigate the skins, to make them look blacker; but the smell, and the crisped condition of the long hair, betrays the cheat; and both ways are detected by rubbing the fur with a moist linen cloth, which grows black in such cases.

"The Chinese have a way of dyeing the sables, so that the colour not only lasts (which the Russian cheats cannot do), but the fur keeps its gloss, and the crisped hairs only discover it. This is the reason that all the sables, which are of the best kind, either in pairs or separate, are carried to Russia; the rest go to China. The very best sables come from the environs of Nertchitsk and Yakutsk; and in this latter district, the country about the river Ud affords sometimes sables, of whom one single fur is often sold at the rate of 60 or 70 rubles, 12 l. or 14 l. The bellies of sables, which are sold in pairs, are about two fingers breadth, and are tied together by 40 pieces, which are sold from 1 l. to 2 l. Sterling. Tails are sold by the hundred. The very best sable-furs must have their tails; but ordinary sables are often cropped, and 100 sold from 4 l. to 8 l. Sterling. The legs or feet of sables are seldom sold separately; white sables are rare, and no common merchandize, but bought only as curiosities: some are yellowish, and are bleached in the spring on the snow."

Sable
Saccade.

SABLE, in heraldry, signifies "black;" and is borrowed from the French, as are most terms in this science: in engraving it is expressed by both horizontal and perpendicular lines crossing each other. Sable of itself signifies constancy, learning, and grief; and ancient heralds will have it, that when it is compounded with

Or	} it signifies	Honour.
Arg.		Fame.
Gul.		Respect.
Azu.		Application.
Ver.		Comfort.
Pur.		Austerity.

The occasion that introduced this colour into heraldry is thus related by Alexander Nisbet, p. 8. The duke of Anjou, king of Sicily, after the loss of that kingdom, appeared at a tournament in Germany all in black, with his shield of that tincture, *semé de larmes*, i. e. besprinkled with drops of water, to represent tears, indicating by that both his grief and loss.

SABLESTAN, or **SABLUSTAN**, a province of Asia, in Persia, on the frontiers of Indostan; bounded on the north by Khorasan; on the east, by the mountains of Balk and Candahar; on the south, by Sageshan or Segestan; and on the west, by Heri. It is a mountainous country, very little known to Europeans; nor is it certain which is the capital town.

SABRE, a kind of sword or scimitar, with a very broad and heavy blade, thick at the back, and a little falcated or crooked towards the point. It is the ordinary weapon worn by the Turks, who are said to be very expert in the use of it.

SABURRA, in medicine, usually denotes any collection of half putrid indigested matter in the stomach and intestines, by which the operation of digestion is impeded.

SABURRÆ, **GRITTS**, in natural history; a genus of fossils, found in minute masses, forming together a kind of powder, the several particles of which are of no determinate shape, nor have any tendency to the figure of crystal, but seem rudely broken fragments of larger masses; not to be dissolved or disunited by water, but retaining their figure in it, and not cohering by means of it into a mass; considerably opaque, and in many species fermenting with acids; often fouled with heterogeneous matters, and not unfrequently taken in the coarser stony and mineral or metalline particles.

Gritts are of various colours, as, 1. The stony and sparry gritts, of a bright or greyish white colour. 2. The red stony gritts. 3. The green stony gritts, composed of homogeneous sparry particles. 4. The yellow gritt, of which there is only one species. 5. The black and blackish gritts, composed of stony or talky particles.

SACÆA, a feast which the ancient Babylonians and other orientals held annually in honour of the deity Anaitis. The Sacæa were in the East what the Saturnalia were at Rome, viz. a feast for the slaves. One of the ceremonies was to choose a prisoner condemned to death, and allow him all the pleasures and gratifications he would wish, before he were carried to execution.

SACCADE, in the manege, is a jerk more or less violent, given by the horseman to the horse, in pulling or twitching the reins of the bridle all on a sudden

and with one pull, and that when a horse lies heavy upon the hand, or obstinately arms himself.

This is a correction used to make a horse carry well; but it ought to be used discreetly, and but seldom.

SACERDOTAL, something belonging to priests. See **PRIEST**.

SACCULUS, in anatomy, a diminutive of *saccus*, signifies a little bag, and is applied to many parts of the body.

SACCHARUM, **SUGAR**, or the *Sugar-Cane*, in botany: A genus of the digynia order, belonging to the triandria class of plants; and in the natural method ranking under the 4th order, *Gramina*. There is no calyx, but a long down; the corolla is bivalved. There is but one species of this genus, viz. the officina. It is a native of Africa, the East Indies, and of Brazil; from whence it was introduced into our West India islands soon after they were settled. The sugar-cane is the glory and the pride of those islands. It amply rewards the industrious planter, enriches the British merchant, gives bread to thousands of manufacturers and seamen, and brings an immense revenue to the crown. For the process of making sugar, see **SUGAR**.

Sugar, formerly a luxury, is now become one of the necessities of life. In crop-time every negro on the plantations, and every animal, even the dogs, grow fat. This sufficiently points out the nourishing and healthy qualities of sugar. It has been alleged, that the eating of sugar spoils the colour of, and corrupts, the teeth: this, however, proves to be a mistake, for no people on the earth have finer teeth than the negroes in Jamaica. Dr Alston, formerly professor of botany and materia medica at Edinburgh, endeavoured to obviate this vulgar opinion: he had a fine set of teeth, which he ascribed solely to his eating great quantities of sugar. Externally too it is often useful: mixed with the pulp of roasted oranges, and applied to putrid or ill-disposed ulcers, it proves a powerful corrector.

SACCHI (Andrea), a celebrated painter, born at Rome in 1594. He was the disciple of Francisco Albano, whom he afterwards surpassed in taste and correctness. He distinguished himself in a very eminent degree by his paintings in fresco; and a strong emulation subsisting between him and Pietro de Cortona, they each arrived at a degree of perfection that neither of them might have known without such a competition. The works of Sacchi have such intrinsic merit, and are finished with such uncommon care and skill, as will always secure the applause of the judicious, and preserve their true value. He died in 1668.

SACHEVEREL (Dr Henry), a famous clergyman of the Tory faction in the reign of queen Anne; who distinguished himself by indecent and scurrilous sermons and writings against the dissenters and revolution principles. He owed his consequence, however, to being indiscreetly prosecuted by the house of lords for his assize-sermon at Derby, and his 5th of November sermon at St Paul's in 1709; in which he asserted the doctrine of non-resistance to government in its utmost extent; and reflected severely on the act of toleration. The high and low church parties were very violent at that time; and the trial of Sacheverel inflamed the high-church party to dangerous riots and excesses: he was, however, suspended for three years, and his sermons burned by the common hangman. The Tories being

Sacerdotal
Sacheverel.

Sack
||
Sackville.

in administration when Sacheverel's suspension expired, he was freed with every circumstance of honour and public rejoicing; was ordered to preach before the commons on the 29th of May, had the thanks of the house for his discourse, and obtained the valuable rectory of St Andrew's, Holborn.

SACK, a wine used by our ancestors, which some have taken to be Rhenish and some Canary wine.—Venner, in his *Via Recta ad Vitum Longam*, printed in 1628, says that sack is “completely not in the third degree, and that some affect to drink sack with sugar and some without; and upon no other ground, as I think, but as it is best pleasing to their palate.” He goes on to say, “that sack, taken by itself, is very hot and very penetrative; being taken with sugar, the heat is both somewhat allayed, and the penetrative quality thereof also retarded.” He adds further, that Rhenish, &c. decline after a twelvemonth, but sack and the other stronger wines are best when they are two or three years old. It appears to be highly probable that sack was not a sweet wine, from its being taken with sugar, and that it did not receive its name from having a saccharine flavour, but from its being originally stored in sacks or borachios. It does not appear to have been a French wine, but a strong wine the production of a hot climate. Probably it was what is called dry mountain, or some Spanish wine of that kind. This conjecture is the more plausible, as Howell, in his French and English Dictionary, printed in the year 1650, translates sack by the words *vin d'Espagne, vin sec*.

Sack of Wool, a quantity of wool containing just 22 stone, and every stone 14 pounds. In Scotland, a sack is 24 stone, each stone containing 16 pounds.

Sack of Cotton Wool, a quantity from one hundred and a half to four hundred weight.

Sacks of Earth, in fortification, are canvas bags filled with earth. They are used in making retrenchments in haste, to place on parapets, or the head of the breaches, &c. to repair them, when beaten down.

SACKBUT, a musical instrument of the wind kind, being a sort of trumpet, though different from the common trumpet both in form and size; it is fit to play a bass, and is contrived to be drawn out or shortened, according to the tone required, whether grave or acute. The Italians call it *trombone*, and the Latins *tuba ductilis*.

SACKVILLE (Thomas, Lord Buckhurst, and earl of Dorset), a statesman and poet, the son of Richard Sackville, Esq; of Buckhurst, in the parish of Withian in Suffex, was born in the year 1536. He was sent to Hart-hall in Oxford, in the latter end of the reign of Edward VI. whence he removed to Cambridge, where he took a master of arts degree, and thence to the Inner Temple. He now applied himself to the study of the law, and was called to the bar. We are told that he commenced poet whilst at the universities, and that these his juvenile productions were much admired, none of which, however, have been preserved.—In the fourth and fifth year of queen Mary, we find him a member of the house of commons; about which time, in 1557, he wrote a poetical piece, intitled *The Induction*, or *The Mirror of Magistrates*. This last was meant to comprehend all the unfortunate Great from the beginning of our history; but the design being dropped, it was inserted in the body of the work. The

Mirror of Magistrates is formed on a dramatic plan; Sackville. in which the persons are introduced speaking. The Induction is written much in the style of Spencer, who, with some probability, is supposed to have imitated this author.

In 1561, his tragedy of *Gorboduc* was acted before queen Elizabeth by the gentlemen of the Inner Temple. This was the first tolerable tragedy in our language. The Companion to the Play-house tells us, that the three first acts were written by Mr Tho. Norton. Sir Philip Sidney, in his Apology for Poetry, says, “it is full of stately speeches, and well-sounding phrases, climbing to the height of Seneca in his style, &c.” Rymer speaks highly in its commendation. Mr Spence, at the instigation of Mr Pope, republished it in 1736, with a pompous preface. It is said to be our first dramatic piece written in verse.

In the first parliament of this reign, Mr Sackville was member for Suffex, and for Bucks in the second. In the mean time he made the tour of France and Italy, and in 1566 was imprisoned at Rome, when he was informed of his father's death, by which he became possessed of a very considerable fortune.

Having now obtained his liberty, he returned to England; and being first knighted was created Lord Buckhurst. In 1570 he was sent ambassador to France. In 1586 he was one of the commissioners appointed to try the unfortunate Mary queen of Scots; and was the messenger employed to report the confirmation of her sentence, and to see it executed. The year following he went ambassador to the States General, in consequence of their complaint against the earl of Leicester; who, disliking his impartiality, prevailed on the queen to recal him, and confine him to his house. In this state of confinement he continued about 10 months, when Leicester dying, he was restored to favour, and in 1580 was installed knight of the garter: but the most incontrovertible proof of the queen's partiality for lord Buckhurst appeared in the year 1591, when she caused him to be elected chancellor in the university of Oxford, in opposition to her favourite Essex. In 1598, on the death of the treasurer Burleigh, lord Buckhurst succeeded him, and by virtue of his office became in effect prime minister; and when, in 1601, the earls of Essex and Southampton were brought to trial, he sat as lord high steward on that awful occasion.

On the accession of James I. he was graciously received, had the office of lord high treasurer confirmed to him for life, and was created earl of Dorset. He continued in high favour with the king till the day of his death; which happened suddenly, on the 19th of April 1608, in the council-chamber at Whitehall. He was interred with great solemnity in Westminster abbey. He was a good poet, an able minister, and an honest man. From him is descended the present noble family of the Dorsets. “It were needless (says Mr Walpole) to add, that he was the patriarch of a race of genius and wit.”

SACKVILLE (Charles, earl of Dorset), a celebrated wit and poet, descended from the foregoing, was born in 1637. He was, like Villiers, Rochester, Sedley, &c. one of the libertines of king Charles's court, and sometimes indulged himself in inexcusable excesses. He openly discountenanced the violent measures of James II. and engaged early for the prince of

Sacrament. Orange, by whom he was made lord chamberlain of the household, and taken into the privy-council. He died in 1706, and left several poetical pieces, which, though not considerable enough to make a volume by themselves, may be found among the works of the minor poets, published in 1749.

SACRAMENT is derived from the Latin word *sacramentum*, which signifies an oath, particularly the oath taken by soldiers to be true to their country and general. The words of this oath, according to Polybius, were, *obtemperaturus sum et facturus quicquid mandabitur ab imperatoribus juxta vires*. The word was adopted by the writers of the Latin church, and employed, perhaps with no great propriety, to denote those ordinances of religion by which Christians came under an obligation, equally sacred with that of an oath, to observe their part of the covenant of grace, and in which they have the assurance of Christ that he will fulfil his part of the same covenant.

Of sacraments, in this sense of the word, Protestant churches admit of but two; and it is not easy to conceive how a greater number can be made out from Scripture, if the definition of a sacrament be just which is given by the church of England. By that church, the meaning of the word sacrament is declared to be "an outward and visible sign of an inward and spiritual grace given unto us, ordained by Christ himself as a means whereby we receive the same, and a pledge to assure us thereof." According to this definition, baptism and the Lord's Supper are certainly sacraments; for each consists of an outward and visible sign of what is believed to be an inward and spiritual grace; both were ordained by Christ himself, and by the reception of each does the Christian come under a solemn obligation to be true to his divine master, according to the terms of the covenant of grace. (See **BAPTISM** and **SUPPER of the Lord**.) The Romanists, however, add to this number *confirmation, penance, extreme unction, ordination, and marriage*, holding in all seven sacraments; but two of those rites not being peculiar to the Christian church cannot possibly be *Christian* sacraments, in contradistinction to the sacraments or obligations into which men of all religions enter. Marriage was instituted from the beginning, when God made man male and female, and commanded them to be fruitful, and multiply and replenish the earth; and penance, as far as it is of the same import with repentance, has a place in all religions which teach that God is merciful, and men fallible.—The external severities imposed upon penitents by the church of Rome (see **PENANCE**) may indeed be in some respects peculiar to the discipline of that church, though the penances of the Hindoos are certainly as rigid; but none of these severities were ordained by Christ himself as the pledge of an inward and spiritual grace; nor do they, like baptism and the Lord's Supper, bring men under obligations which are supposed to be analogous to the meaning of the word *sacramentum*. Confirmation has a better title to the appellation of a sacrament than any of the other five popish rites of that name, though it certainly was not considered as such by the earliest writers of the Christian church, nor does it appear to have been ordained by Christ himself, (see **CONFIRMATION**). Ordination is by many churches considered as a very important rite; but as it is not administered to *all* men, nor has any particular form ap-

propriated to it in the New Testament, it cannot be considered as a Christian sacrament conferring grace generally necessary to salvation. It is rather a form of authorising certain persons to perform certain offices, which respect not themselves but the whole church; and extreme unction is a rite which took its rise from the miraculous powers of the primitive church vainly claimed by the succeeding clergy. (See **ORDINATION** and *Extreme UNCTION*.) These considerations seem to have some weight with the Romish clergy themselves; for they call the eucharist, by way of eminence, the *holy sacrament*. Thus to expose the holy sacrament, is to lay the consecrated host on the altar to be adored.—The procession of the holy sacrament is that in which this host is carried about the church, or about a town.

Numerous as we think the sacraments of the Romish church, a sect of Christians sprung up in England early in the current century who increased their number.—The founder of this sect was a Dr Deacon, we think, of Manchester, where the remains of it subsisted very lately, and probably do so at present. According to these men, every rite and every phrase in the book called the *Apostolical Constitutions* were certainly in use among the apostles themselves. Still, however, they make a distinction between the greater and the lesser sacraments. The greater sacraments are only two, baptism and the Lord's supper. The lesser are no fewer than ten, viz. five belonging to baptism, *exorcism, anointing with oil, the white garment, a taste of milk and honey, and anointing with chrism or ointment*. The other five are, *the sign of the cross, imposition of hands, unction of the sick, holy orders, and matrimony*. Of the nature of these lesser sacraments, or the grace which they are supposed to confer, our limits will permit us to give no account.—Nor is it necessary that we should. The sect which taught them, if not extinguished, is certainly in its last wane. It has produced, however, one or two learned men; and its founder's Full, True, and Comprehensive View of Christianity, in two Catechisms, is a work which the Christian antiquary will read with pleasure for information, and the philosopher for the materials which it contains for meditation on the workings of the human mind. It was published in 8vo, in the year 1748.

Congregation of the Holy SACRAMENT, a religious establishment formed in France, whose founder was Autherius, bishop of Bethlehem, and which, in 1644, received an order from Urban VIII. to have always a number of ecclesiastics ready to exercise their ministry among pagan nations, wherever the pope, or congregation *de propaganda*, should appoint.

SACRAMENTARIANS, a general name given to all such as have published or held erroneous doctrines of the sacrament of the Lord's Supper. The term is chiefly applied among Roman Catholics, by way of reproach, to the Lutherans, Calvinists, and other Protestants.

SACRAMENTARY, an ancient Romish church-book, which contains all the prayers and ceremonies practised at the celebration of the sacraments.

It was wrote by pope Gelasius, and afterwards revised, corrected, and abridged, by St Gregory.

SACRE, or **SAKER**, in ornithology, the name of a species of falcon, called by authors *falco sacer*, and differently

Sacrament
||
Sacre.

Sacred,
Sacrifice.

ently described by different authors, but by all agreed to be an extremely bold and active bird. It is a native of the northern regions of Europe; and a variety called by some writers the *speckled partridge haruk* is found at Hudson's bay, North America.

SACRED, something holy, or that is solemnly offered and consecrated to God, with benedictions, unctions, &c.

Kings, prelates, and priests, are reckoned sacred persons; abbots are only blessed.—The deaconhood, subdeaconhood, and priesthood, are all sacred orders, and are said to impress a sacred indelible character. The custom of consecrating kings with holy oil is derived (says Gutlingius) from the Hebrews; among whom, he agrees with Grotius, it was never used but to kings who had not an evident right by succession. He adds, that the Christian emperors never used it before Justin the younger; from whom he takes it to have passed to the Goths, &c.

SACRED is also applied to things belonging to God and the church. Church-lands, ornaments, &c. are held sacred.—The sacred college is that of the cardinals.

SACRED *Majesty*, is applied to the emperor and to the king of England; yet Loyseau says it is blasphemy. See MAJESTY. The ancients held a place struck with thunder as sacred. In the civil law, sacred place chiefly denotes that where a person deceased has been interred.

SACRED *Elixir*. See ELIXIR.

SACRIFICE, an offering made to God on an altar, by means of a regular minister, as an acknowledgment of his power, and a payment of homage. Sacrifices (though the term is sometimes used to comprehend all the offerings made to God, or in any way devoted to his service and honour) differ from mere oblations in this, that in a sacrifice there is a real destruction or change of the thing offered; whereas an oblation is only a simple offering or gift, without any such change at all: thus, all sorts of tythes, and first fruits, and whatever of mens worldly substance is consecrated to God, for the support of his worship and the maintenance of his ministers, are offerings or oblations: and these, under the Jewish law, were either of living creatures or other things: but sacrifices, in the more peculiar sense of the term, were either wholly or in part consumed by fire. They have by divines been divided into bloody and unbloody. Bloody sacrifices were made of living creatures; unbloody of the fruits of the earth. They have also been divided into *expiatory*, *impetratory*, and *eucharistical*. The first kind were offered to obtain of God forgiveness of sins; the second, to procure some favour; and the third, to express thankfulness for favours already received. Under one or other of these heads may all sacrifices be arranged; though we are told, that the Egyptians had 666 different kinds, a number surpassing all credibility.

Concerning the origin of sacrifices very various opinions have been held. By many, the Phœnicians are supposed to have been the authors of them; though Porphyry attributes their invention to the Egyptians; and Ovid imagines, from the import of the name *victim* and *hostia*, that no bloody sacrifices were offered till wars prevailed in the world, and nations obtained victories

over their enemies. These are mere hypotheses, contradicted by the most authentic records of antiquity, and entitled to no regard.

By modern deists, sacrifices are said to have had their origin in superstition, which operates much in the same way in every country. It is therefore weak, according to those men, to derive this practice from any particular people; since the same mode of reasoning would lead various nations, without any intercourse with each other, to entertain the same opinions respecting the nature of their gods, and the proper means of appeasing their anger. Men of gross conceptions imagine their deities to be like themselves, covetous and cruel. They are accustomed to appease an injured neighbour by a composition in money; and they endeavour to compound in the same manner with their gods, by rich offerings to their temples and to their priests. The most valuable property of a simple people is their cattle. These offered in sacrifice are supposed to be fed upon by the divinity, and are actually fed upon by his priests. If a crime is committed which requires the punishment of death, it is accounted perfectly fair to appease the deity by offering one life for another; because, by savages, punishment is considered as a debt for which a man may compound in the best way that he can, and which one man may pay for another. Hence, it is said, arose the absurd notions of imputed guilt and vicarious atonement. Among the Egyptians, a white bull was chosen as an expiatory sacrifice to their god Apis. After being killed at the altar, his head was cut off, and cast into the river, with the following execration: "May all the evils impending over those who perform this sacrifice, or over the Egyptians in general, be averted on this head *."

* Herodotus,

lib. 2.
Had sacrifice never prevailed in the world but among such gross idolaters as worshipped departed heroes, who were supposed to retain in their state of deification all the passions and appetites of their mortal state, this account of the origin of that mode of worship would have been to us perfectly satisfactory. We readily admit, that such mean notions of their gods may have actually led far distant tribes, who could not derive any thing from each other through the channel of tradition, to imagine that beings of human passions and appetites might be appeased or bribed by costly offerings. But we know from the most incontrovertible authority, that sacrifices of the three kinds that we have mentioned were in use among people who worshipped the true God, and who must have had very correct notions of his attributes. Now we think it impossible that such notions could have led any man to fancy that the taking away of the life of a harmless animal, or the burning of a cake or other fruits of the earth in the fire, would be acceptable to a Being self-existent, omnipotent, and omniscient, who can neither be injured by the crimes of his creatures, nor receive any accession of happiness from a thousand worlds.

Sensible of the force of such reasoning as this, some persons of great name, who admit the authenticity of the Jewish and Christian sacrifices, and firmly rely on the atonement made by Christ, are yet unwilling (it is difficult to conceive for what reason) to allow that sacrifices were originally instituted by God. Of this way of thinking were St Chrysostom, Spencer, Grotius, and Warburton, as were likewise the Jews Maimonides, R.

Levi,

Sacrifice. Levi, Ben Gerson, and Abarbanel. The greater part of these writers maintain, that sacrifices were at first a human institution; and that God, in order to prevent their being offered to idols, introduced them into his service, though he did not approve of them as good in themselves, or as proper rites of worship. That the infinitely wise and good God should introduce into his service improper rites of worship, appears to us so extremely improbable, that we cannot but wonder how such an opinion should ever have found its way into the minds of such men as those who held it. Warburton's theory of sacrifice is much more plausible, and being more lately published, is worthy of particular examination.

*Divine
Leg. b. ix.
c. 2.*

According to this ingenious prelate, sacrifices had their origin in the sentiments of the human heart, and in the ancient mode of conversing by action in aid of words. Gratitude to God for benefits received is natural to the mind of man, as well as his bounden duty. "This duty (says the bishop *) was in the most early times discharged in expressive actions, the least equivocal of which was the offerer's bringing the first fruits of pasturage or agriculture to that sequestered place where the Deity used to be more solemnly invoked, at the stated times of public worship; and there presenting them in homage, with a demand which spoke to this purpose. — 'I do hereby acknowledge thee, O my God! to be the author and giver of all good: and do now, with humble gratitude, return my warmest thanks for these thy blessings particularly bestowed upon me.'—Things thus devoted became thenceforth sacred: and to prevent their *desecration*, the readiest way was to send them to the table of the priest, or to consume them in the fire of the altar. Such, in the opinion of our author, was the origin of eucharistical sacrifices. *Impetratory* or *precative* sacrifices had, he thinks, the same origin, and were contrived to express by action an invocation for the continuance of God's favour. "Expiatory sacrifices (says the learned prelate) were in their own nature as intelligible, and in practice as rational, as either of the other two. Here, instead of presenting the first fruits of agriculture and pasturage, in corn, wine, oil, and wool, as in the eucharistical, or a portion of what was to be sown or otherwise propagated, as in the *impetratory*; some chosen animal precious to the repenting criminal, who deprecates or supposed to be obnoxious to the Deity who is to be appeased, was offered up and slain at the altar, in an action which, in all languages, when translated into words, speaks to this purpose:—'I confess my transgressions at thy footstool, O my God! and with the deepest contrition implore thy pardon; confessing that I deserve death for those my offences.'—The latter part of the confession was more forcibly expressed by the *action* of striking the devoted animal, and depriving it of life; which, when put into words, concluded in this manner.—'And I own that I myself deserve the death which I now inflict on this animal.'

This system of sacrifice, which his lordship thinks so well supported by the most early movements of simple nature, we admit to be ingenious, but by no means satisfactory. That mankind in the earlier ages of the world were accustomed to supply the deficiencies of their language by expressive gesticulations we are not inclined to controvert: the custom prevails among savage nations, or nations half civilized, at the present day. His

lordship, however, is of opinion, and we heartily agree with him, that our first parents were instructed by God to make articulate sounds significant of ideas, notions, and things (see LANGUAGE, n° 6.), and not left to fabricate a language for themselves. That this heaven-taught language could be at first copious, no man will suppose who thinks of the paucity of ideas which those who spoke it had to express; but when we consider its origin, we cannot entertain a doubt but that it was precise and perspicuous, and admirably adapted to all the real purposes of life. Among these purposes must surely be included the worship of God as the most important of all. Every sentiment therefore which enters into worship, gratitude, invocation, confession, and deprecation, the progenitors of mankind were undoubtedly taught to clothe in words the most significant and unequivocal; but we know from Moses, whose divine legation the bishop surely admitted, that Cain and Abel, the eldest children of our first parents, worshipped God by the rites of sacrifice: and can we suppose that this practice occurred to *them* from their having so far forgotten the language taught them by their father, as to be under the necessity of denoting by action what they could not express by words? If this supposition be admitted, it will force another upon us still more extravagant. Even Adam himself must, in that case, have become dumb in consequence of his fall; for it is not conceivable, that as long as he was able to utter articulate sounds, and affix a meaning to them, he would cease, in the presence of his family, to confess his sins, implore forgiveness, and express his gratitude to God for all his mercies.

The right reverend writer, as if aware of some such objection as this to his theory, contends, that if sacrifices had arisen from any other source than the light of reason, the Scripture would not have been silent concerning that source; "especially since we find Moses carefully recording what God immediately, and not *nature*, taught to Adam and his family. Had the original of sacrifice, says he, been prescribed, and directly commanded by the Deity, the sacred historian could never have omitted the express mention of that circumstance. The two capital observances in the Jewish ritual were the SABBATH and SACRIFICES. To impress the highest reverence and veneration on the *Sabbath*, he is careful to record its divine original: and can we suppose that, had sacrifices had the same original, he would have neglected to establish this truth at the time that he recorded the other, since it is of equal use and of equal importance? I should have said, indeed, of much greater; for the multifarious *sacrifices* of the LAW had not only a reference to the *forfeiture* of Adam, but likewise prefigured our redemption by Jesus Christ."

But all this reasoning was foreseen, and completely answered before his lordship gave it to the public. It is probable, that though the distinction of weeks was well known over all the eastern world, the Hebrews, during their residence in Egypt, were very negligent in their observance of the Sabbath. To enforce a religious observance of that sacred day, it became necessary to inform them of the time and occasion of its first institution, that they might keep it holy in memory of the creation; but, in a country like Egypt, the people were in danger of holding sacrifices rather in too high than too low veneration, so that there was not the same necessity

Sacrifice. necessity for mentioning explicitly the early institution of them. It was sufficient that they knew the divine institution of their own sacrifices, and the purposes for which they were offered. Besides this, there is reason to believe, that, in order to guard the Hebrews from the infections of the heathen, the rite of sacrificing was loaded with many additional ceremonies at its second institution under Moses. It might, therefore, be improper to relate its original simplicity to a rebellious people, who would think themselves ill-used by any additional burdens of trouble or expence, however really necessary to their happiness. Bishop Warburton sees clearly the necessity of concealing from the Jews the spiritual and refined nature of the Christian dispensation, lest such a backsliding people should, from the contemplation of it, have held in contempt their own economy. This, he thinks, is the reason why the prophets, speaking of the reign of the Messiah, borrow their images from the Mosaic dispensation, that the people living under that dispensation might not despise it from perceiving its end; and we think the reason will hold equally good for their lawgiver concealing from them the simplicity of the first sacrifices, lest they should be tempted to murmur at their own multifarious ritual.

But his lordship thinks that sacrifices had their origin from the light of natural reason. We should be glad to know what light natural reason can throw upon such a subject. That ignorant pagans, adoring as gods departed heroes, who still retained their sensual appetites, might naturally think of appeasing such beings with the fat of fed beasts, and the perfumes of the altar, we have already admitted; but that Cain and Abel, who knew that the God whom they adored has neither body, parts, nor passions; that he created and sustains the universe; and that from his very nature he must will the happiness of all his creatures, should be led by the light of natural reason to think of appeasing him, or obtaining favours from him, by putting to death harmless animals, is a position which no arguments of his lordship can ever compel us to admit. That Abel's sacrifice was indeed accepted, we know; but it was not accepted because it proceeded from the movements of the human mind, and the deficiency of the original language, but because it was offered through *faith*. The light of natural reason, however, does not generate faith, but science; and when it fails of that, its offspring is absurdity. "Faith is the substance of things hoped for, the evidence of things not seen," and comes not by reasoning but by hearing. What things then were they of which Abel had heard, for which he hoped, and in the faith of which he offered sacrifice? Undoubtedly it was a restoration to that immortality which was forfeited by the transgression of his parents. Of such redemption an obscure intimation had been given to Adam, in the promise that the seed of the woman should bruise the head of the serpent; and it was doubtless to impress upon his mind in more striking colours the manner in which this was to be done, that bloody sacrifices were first instituted †. As long as the import of such rites was thus understood, they constituted a perfectly rational worship, as they showed the people that the wages of sin is death; but when men sunk into idolatry, and lost all hopes of a resurrection from the dead, the slaughtering of animals to appease their deities was a practice grossly superstitious. It rests

ed in itself without pointing to any farther end, and the grovelling worshippers believed that by their sacrifices they purchased the favour of their deities. When once this notion was entertained, human sacrifices were soon introduced; for it naturally occurred to those who offered them, that what they most valued themselves would be most acceptable to their offended gods, (see the next article). By the Jewish law, these abominable offerings were strictly forbidden, and the whole ritual of sacrifice restored to its original purity, though not simplicity.

All Christian churches, the Socinian, if it can be called a church, not excepted, have till very lately agreed in believing that the Jewish sacrifices served, amongst other uses, for types of the death of Christ and the Christian worship, (see TYPE.) In this belief all sober Christians agree still, whilst many are of opinion that they were likewise federal rites, as they certainly were considered by the ancient Romans *.

Of the various kinds of Jewish sacrifices, and the subordinate ends for which they were offered, a full account is given in the books of Moses. When an Israelite offered a loaf or a cake, the priest broke it in two parts; and setting aside that half which he reserved for himself, broke the other into crumbs, poured oil, wine, incense, and salt upon it, and spread the whole upon the fire of the altar. If these offerings were accompanied with the sacrifice of an animal, they were thrown upon the victim to be consumed along with it. If the offerings were of the ears of new corn, they were parched at the fire, rubbed in the hand, and then offered to the priest in a vessel, over which he poured oil, incense, wine, and salt, and then burnt it upon the altar, having first taken as much of it as of right belonged to himself.

The principal sacrifices among the Hebrews consisted of bullocks, sheep, and goats; but doves and turtles were accepted from those who were not able to bring the other: these beasts were to be perfect, and without blemish. The rites of sacrificing were various; all of which are very minutely described in the books of Moses.

The manner of sacrificing among the Greeks and Romans was as follows. In the choice of the victim, they took care that it was without blemish or imperfection; its tail was not to be too small at the end; the tongue not black, nor the ears cleft; and that the bull was one that had never been yoked. The victim being pitched upon, they gilt his forehead and horns, especially if a bull, heifer, or cow. The head they also adorned with a garland of flowers, a woollen infula or holy fillet, whence hung two rows of chaplets with twisted ribands; and on the middle of the body a kind of stole, pretty large, hung down on each side: the lesser victims were only adorned with garlands and bundles of flowers, together with white tufts or wreaths.

The victims thus prepared were brought before the altar; the lesser being driven to the place, and the greater led by an halter; when, if they made any struggle, or refused to go, the resistance was taken for an ill omen, and the sacrifice frequently set aside. The victim thus brought was carefully examined, to see that there was no defect in it; then the priest, clad in his sacerdotal habit, and accompanied with the sacrificers and other attendants, and being washed and purified ac-

Sacrifice.

* Tit. Liv. lib. 21. cap. 45.

† See Prophecy.

Sacrifice.

According to the ceremonies prescribed, turned to the right hand, and went round the altar, sprinkling it with meal and holy water, and also besprinkling those who were present. Then the crier proclaimed with a loud voice, Who is here? To which the people replied, Many and good. The priest then having exhorted the people to join with him by saying, Let us pray, confessed his own unworthiness, acknowledging that he had been guilty of divers sins; for which he begged pardon of the gods, hoping that they would be pleased to grant his requests, accept the oblations offered them, and send them all health and happiness; and to this general form added petitions for such particular favours as were then desired. Prayers being ended, the priest took a cup of wine; and having tasted it himself, caused his assistants to do the like; and then poured forth the remainder between the horns of the victim. Then the priest or the crier, or sometimes the most honourable person in the company, killed the beast, by knocking it down or cutting its throat. If the sacrifice was in honour of the celestial gods, the throat was turned up towards heaven, but if they sacrificed to the heroes or infernal gods, the victim was killed with its throat towards the ground. If by accident the beast escaped the stroke, leaped up after it, or expired with pain and difficulty, it was thought to be unacceptable to the gods. The beast being killed, the priest inspected its entrails, and made predictions from them. They then poured wine, together with frankincense, into the fire, to increase the flame, and then laid the sacrifice on the altar; which in the primitive times was burnt whole to the gods, and thence called an *holocaust*; but in after-times, only part of the victim was consumed in the fire, and the remainder reserved for the sacrificers; the thighs, and sometimes the entrails, being burnt to their honour, the company feasted upon the rest. During the sacrifice, the priest, and the person who gave the sacrifice, jointly prayed, laying their hand upon the altar. Sometimes they played upon musical instruments in the time of the sacrifice, and on some occasions they danced round the altar, singing sacred hymns in honour of the god.

HUMAN SACRIFICES, an abominable practice, about the origin of which different opinions have been formed.—The true account seems to be that which we have given in the preceding article. When men had gone so far as to indulge the fancy of bribing their gods by sacrifice, it was natural for them to think of enhancing the value of so cheap an *atonement* by the cost and rarity of the offering; and, oppressed with their malady, they never rested till they had got to that which they conceived to be the most precious of all, a human sacrifice.

† *Apud Eu-
seb. Præp.
Evangel.
lib. 4.*

“It was customary (says Sanchoniathon †), in ancient times, in great and public calamities, before things became incurable, for princes and magistrates to offer up in sacrifice to the avenging dæmons the dearest of their offspring,” Sanchoniathon wrote of Phœnicia, but the practice prevailed in every nation under heaven of which we have received any ancient account. The Egyptians had it in the early part of their monarchy. The Cretans likewise had it, and retained it for a longer time.—The nations of Arabia did the same. The people of Dumah, in particular, sacrificed every year a child, and buried it underneath an altar, which they made use of instead of an idol; for they did not admit of images.

Sacrifice.

The Persians buried people alive. Amestris, the wife of Xerxes, entombed 12 persons quick under ground for the good of her soul. It would be endless to enumerate every city, or every province, where these dire practices obtained. The Cyprians, the Rhodians, the Phœceans, the Ionians, those of Chios, Lesbos, Tenedos, all had human sacrifices. The natives of the Tauric Chersonesus offered up to Diana every stranger whom chance threw upon their coast. Hence arose that just expostulation in Euripides upon the inconsistency of the proceeding; wherein much good reasoning is implied. Iphigenia wonders, as the goddess delighted in the blood of men, that every villain and murderer should be privileged to escape, nay, be driven from the threshold of the temple; whereas, if an honest and virtuous man chanced to stray thither, he only was seized upon, and put to death. The Pelasgi, in a time of scarcity, vowed the tenth of all that should be born to them for a sacrifice, in order to procure plenty. Aristomenes the Messenian slew 300 noble Lacedæmonians, among whom was Theopompus the king of Sparta, at the altar of Jupiter at Ithome. Without doubt the Lacedæmonians did not fail to make ample returns; for they were a severe and revengeful people, and offered the like victims to Mars. Their festival of the *Diamastigosis* is well known; when the Spartan boys were whipped in the sight of their parents with such severity before the altar of Diana Orthia, that they often expired under the torture. Phylarchus affirms, as he is quoted by Porphyry, that of old every Grecian state made it a rule, before they marched towards an enemy, to solicit a blessing on their undertakings by human victims.

The Romans were accustomed to the like sacrifices. They both devoted themselves to the infernal gods, and constrained others to submit to the same horrid doom. Hence we read in Titus Livius, that, in the consulate of Æmilius Paulus and Terentius Varro, two Gauls, a man and a woman, and two in like manner of Greece, were buried alive at Rome in the Ox-market, where was a place under ground, walled round, to receive them; which had before been made use of for such cruel purposes. He says it was a sacrifice not properly Roman, that is, not originally of Roman institution; yet it was frequently practised there, and that too by public authority. Plutarch makes mention of a like instance a few years before, in the consulship of Flaminius and Furius. There is reason to think, that all the principal captives who graced the triumphs of the Romans, were at the close of that cruel pageantry put to death at the altar of Jupiter Capitolinus. Caius Marius offered up his own daughter for a victim to the Dii Averrunci, to procure success in a battle against the Cimbri; as we are informed by Dorotheus, quoted by Clemens. It is likewise attested by Plutarch, who says that her name was *Calpurnia*. Marius was a man of a sour and bloody disposition; and had probably heard of such sacrifices being offered in the enemy's camp, among whom they were very common, or he might have beheld them exhibited at a distance; and therefore murdered what was nearest, and should have been dearest to him, to counteract their fearful spells, and outdo them in their wicked machinery. Cicero, making mention of this custom being common in Gaul, adds, that it prevailed among that people even at the

time.

Sacr. Acc. time he was speaking: from whence we may be led to infer, that it was then discontinued among the Romans. And we are told by Pliny, that it had then, and not very long, been discouraged. For there was a law enacted, when Lentulus and Crassus were consuls, so late as the 657th year of Rome, that there should be no more human sacrifices: for till that time those horrid rites had been celebrated in broad day without any mask or controul; which, had we not the best evidence for the fact, would appear scarce credible. And however they may have been discontinued for a time, we find that they were again renewed; tho' they became not so public, nor so general. For not very long after this, it is reported of Augustus Cæsar, when Perusia surrendered in the time of the second triumvirate, that besides multitudes executed in a military manner, he offered up, upon the Ides of March, 300 chosen persons, both of the equestrian and senatorial order, at an altar dedicated to the manes of his uncle Julius. Even at Rome itself this custom was revived: and Porphyry assures us, that in his time a man was every year sacrificed at the shrine of Jupiter Latialis. Heliogabalus offered the like victims to the Syrian deity which he introduced among the Romans. The same is said of Aurelian.

The Gauls and the Germans were so devoted to this shocking custom, that no business of any moment was transacted among them without being prefaced with the blood of men. They were offered up to various gods; but particularly to Hesus, Taranis, and Thau-tates. These deities are mentioned by Lucan, where he enumerates the various nations who followed the fortunes of Cæsar.

The altars of these gods were far removed from the common resort of men; being generally situated in the depth of woods, that the gloom might add to the horror of the operation, and give a reverence to the place and proceeding. The persons devoted were led thither by the Druids, who presided at the solemnity, and performed the cruel offices of the sacrifice. Tacitus takes notice of the cruelty of the Hermunduri, in a war with the Catti, wherein they had greatly the advantage; at the close of which they made one general sacrifice of all that was taken in battle. The poor remains of the legions under Varus suffered in some degree the same fate. There were many places destined for this purpose all over Gaul and Germany; but especially in the mighty woods of Arduenna, and the great Hercynian forest; a wild that extended above 30 days journey in length. The places set apart for this solemnity were held in the utmost reverence, and only approached at particular seasons. Lucan mentions a grove of this sort near Massilia, which even the Roman soldiers were afraid to violate, though commanded by Cæsar. It was one of those set apart for the sacrifices of the country.

Claudian compliments Stilicho, that, among other advantages accruing to the Roman armies through his conduct, they could now venture into the awful forest of Hercynia, and follow the chace in those so much dreaded woods, and otherwise make use of them.

These practices prevailed among all the people of the north, of whatever denomination. The Massagetæ, the Scythians, the Getes, the Sarmatians, all the various nations upon the Baltic, particularly the

Suevi and Scandinavians, held it as a fixed principle, that their happiness and security could not be obtained but at the expence of the lives of others. Their chief gods were Thor and Woden, whom they thought they could never sufficiently glut with blood. They had many very celebrated places of worship; especially in the island Rugen, near the mouth of the Oder; and in Zeeland: some, too, very famous among the Semnones and Naharvalli. But the most revered of all, and the most frequented, was at Upsal; where there was every year a grand celebrity, which continued for nine days. During this term they sacrificed animals of all sorts: but the most acceptable victims, and the most numerous, were men. Of these sacrifices none were esteemed so auspicious and salutary as a sacrifice of the prince of the country. When the lot fell for the king to die, it was received with universal acclamations and every expression of joy; as it once happened in the time of a famine, when they cast lots, and it fell to king Domalder to be the people's victim: and he was accordingly put to death. Olaus Tretelger, another prince, was burnt alive to Woden. They did not spare their own children. Harald the son of Gunild, the first of that name, slew two of his children to obtain a storm of wind. "He did not let (says Verstegan) to sacrifice two of his sons unto his idols, to the end he might obtain of them such a tempest at sea, as should break and disperse the shipping of Harald king of Denmark." Saxo Grammaticus mentions a like fact. He calls the king Haquin; and speaks of the persons put to death as two very hopeful young princes. Another king slew nine sons to prolong his own life; in hopes, perhaps, that what they were abridged of would in great measure be added to himself. Such instances, however, occur not often: but the common victims were without end. Adam Bremensis, speaking of the awful grove at Upsal, where these horrid rites were celebrated, says, that there was not a single tree but what was revered, as if it were gifted with some portion of divinity: and all this because they were stained with gore and foul with human putrefaction. The same is observed by Scheiffer in his account of this place.

The manner in which the victims were slaughtered, was diverse in different places. Some of the Gaulish nations chined them with a stroke of an ax. The Celtæ placed the man who was to be offered for a sacrifice upon a block, or an altar, with his breast upwards, and with a sword struck him forcibly across the sternum; then tumbling him to the ground, from his agonies and convulsions, as well as from the effusion of blood, they formed a judgment of future events. The Cimbri ripped open the bowels; and from them they pretended to divine. In Norway they beat mens brains out with an ox-yoke. The same operation was performed in Iceland, by dashing them against an altar of stone. In many places they transfixed them with arrows. After they were dead, they suspended them upon the trees, and left them to putrefy. One of the writers above quoted mentions, that in his time 70 carcasses of this sort were found in a wood of the Scevi. Dithmar of Merseburgh, an author of nearly the same age, speaks of a place called *Ledur* in Zeeland, where there were every year 99 persons sacrificed to the god Swantowite. During these bloody festivals a general

Sacrifice. joy prevailed, and banquets were most royally served. They fed, caroused, and gave a loose to indulgence, which at other times was not permitted. They imagined that there was something mysterious in the number nine: for which reason these feasts were in some places celebrated every ninth year, in others every ninth month; and continued for nine days. When all was ended, they washed the image of the deity in a pool; and then dismissed the assembly. Their servants were numerous, who attended during the term of their feasting, and partook of the banquet. At the close of all, they were smothered in the same pool, or otherwise made away with. On which Tacitus remarks, how great an awe this circumstance must necessarily infuse into those who were not admitted to these mysteries.

These accounts are handed down from a variety of authors in different ages; many of whom were natives of the countries which they describe, and to which they seem strongly attached. They would not therefore have brought so foul an imputation on the part of the world in favour of which they were each writing, nor could there be that concurrence of testimony, were not the history in general true.

The like custom prevailed to a great degree at Mexico, and even under the mild government of the Peruvians; and in most parts of America. In Africa it is still kept up; where, in the inland parts, they sacrifice some of the captives taken in war to their fetiches, in order to secure their favour. Snelgrave was in the king of Dahome's camp, after his inroad into the countries of Ardra and Whidaw; and says, that he was a witness to the cruelty of this prince, whom he saw sacrifice multitudes to the deity of his nation.

The same abominable worship is likewise practised occasionally in the islands visited by Captain Cook, and other circumnavigators, in the South Sea. It seems indeed to have prevailed in every country at one period of the progress of civilization, and undoubtedly had the origin which we have assigned to it.

The sacrifices of which we have been treating, if we except some few instances, consisted of persons doomed by the chance of war, or assigned by lot, to be offered. But among the nations of Canaan, the victims were peculiarly chosen. Their own children, and whatever was nearest and dearest to them, were deemed the most worthy offering to their god. The Carthaginians, who were a colony from Tyre, carried with them the religion of their mother-country, and instituted the same worship in the parts where they settled. It consisted in the adoration of several deities, but particularly of Kronus; to whom they offered human sacrifices, and especially the blood of children. If the parents were not at hand to make an immediate offer, the magistrates did not fail to make choice of what was most fair and promising, that the god might not be defrauded of his dues. Upon a check being received in Sicily, and some other alarming circumstances happening, Hamilcar without any hesitation laid hold of a boy, and offered him on the spot to Kronus; and at the same time drowned a number of priests, to appease the deity of the sea. The Carthaginians another time, upon a great defeat of their army by Agathocles, imputed their miscarriages to the anger of this god, whose services had been neglected. Touched with this, and seeing the

enemy at their gates, they seized at once 300 children of the prime nobility, and offered them in public for a sacrifice. Three hundred more, being persons who were somehow obnoxious, yielded themselves voluntarily, and were put to death with the others. The neglect of which they accused themselves, consisted in sacrificing children purchased of parents among the poorer sort, who reared them for that purpose, and not selecting the most promising, and the most honourable, as had been the custom of old. In short, there were particular children brought up for the altar, as sheep are fattened for the shambles; and they were bought and butchered in the same manner. But this indiscriminate way of proceeding was thought to have given offence. It is remarkable, that the Egyptians looked out for the most specious and handsome person to be sacrificed. The Albanians pitched upon the best man of the community, and made him pay for the wickedness of the rest. The Carthaginians chose what they thought the most excellent, and at the same time the most dear to them; which made the lot fall heavy upon their children. This is taken notice of by Silius Italicus in his fourth book.

Kronus, to whom these sacrifices were exhibited, was an oriental deity, the god of light and fire; and therefore always worshipped with some reference to that element. See PHOENICIA.

The Greeks, we find, called the deity to whom these offerings were made *Agraulus*; and feigned that she was a woman, and the daughter of Cecrops. But how came Cecrops to have any connection with Cyprus? *Agraulos* is a corruption and transposition of the original name, which should have been rendered *Uk El Aur*, or *Uk El Aurus*; but has, like many other oriental titles and names, been strangely sophisticated, and is here changed to *Agraulos*. It was in reality the god of light, who was always worshipped with fire. This deity was the Moloch of the Tyrians and Canaanites, and the Melech of the east; that is, the great and principal god, the god of light, of whom fire was esteemed a symbol; and at whose shrine, instead of viler victims, they offered the blood of men.

Such was the Kronus of the Greeks, and the Moloch of the Phœnicians: and nothing can appear more shocking than the sacrifices of the Tyrians and Carthaginians, which they performed to this idol. In all emergencies of state, and times of general calamity, they devoted what was most necessary and valuable to them for an offering to the gods, and particularly to Moloch. But besides these undetermined times of bloodshed, they had particular and prescribed seasons every year, when children were chosen out of the most noble and reputable families, as before mentioned. If a person had an only child, it was the more liable to be put to death, as being esteemed more acceptable to the deity, and more efficacious for the general good. Those who were sacrificed to Kronus were thrown into the arms of a molten idol, which stood in the midst of a large fire, and was red with heat. The arms of it were stretched out, with the hands turned upwards, as it were to receive them; yet sloping downwards, so that they dropt from thence into a glowing furnace below. To other gods they were otherwise slaughtered, and, as it is implied, by the very hands of their parents. What can be more horrid

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horrid to the imagination, than to suppose a father leading the dearest of all his sons to such an infernal shrine? or a mother the most engaging and affectionate of her daughters, just rising to maturity, to be slaughtered at the altar of Ashtaroth or Baal? Justin describes this unnatural custom very pathetically: *Quippe homines, ut victimas, immolabant: et impuberes (quæ ætas hostium misericordiam provocat) aris admovabant; pacem sanguine eorum exposcentes, pro quorum vitâ Dii rogari maxime solent.* Such was their blind zeal, that this was continually practised; and so much of natural affection still left unextinguished, as to render the scene ten times more shocking from the tenderness which they seemed to express. They embraced their children with great fondness, and encouraged them in the gentlest terms, that they might not be appalled at the sight of the hellish process; begging of them to submit with cheerfulness to this fearful operation. If there was any appearance of a tear rising, or a cry unawares escaping, the mother smothered it with her kisses, that there might not be any show of backwardness or constraint, but the whole be a free-will offering. These cruel endearments over, they stabbed them to the heart, or otherwise opened the sluices of life; and with the blood warm, as it ran, besmeared the altar and the grim visage of the idol. These were the customs which the Israelites learned of the people of Canaan, and for which they are upbraided by the Psalmist: "They did not destroy the nations, concerning whom the Lord commanded them; but were mingled among the heathen, and learned their works: yea, they sacrificed their sons and their daughters unto devils, and shed innocent blood, even the blood of their sons and of their daughters, whom they sacrificed unto the idols of Canaan; and the land was polluted with blood. Thus were they defiled with their own works, and went a-whoring with their own inventions."

These cruel rites, practised in so many nations, made Plutarch debate with himself, "Whether it would not have been better for the Galatæ, or for the Scythians, to have had no tradition or conception of any superior beings, than to have formed to themselves notions of gods who delighted in the blood of men; of gods, who esteemed human victims the most acceptable and perfect sacrifice? Would it not (says he) have been more eligible for the Carthaginians to have had the atheist Critias, or Diagoras, their lawgiver, at the commencement of their polity, and to have been taught, that there was neither god nor demon, than to have sacrificed, in the manner they were wont, to the god which they adored? Wherein they acted, not as the person did whom Empedocles describes in some poetry, where he exposes this unnatural custom. The fire there with many idle vows offers up unwittingly his son for a sacrifice; but the youth was so changed in feature and figure, that his father did not know him. These people used, knowingly and wilfully, to go through this bloody work, and slaughter their own offspring. Even they who were childless would not be exempted from this cursed tribute; but purchased children, at a price, of the poorer sort, and put them to death with as little remorse as one would kill a lamb or a chicken. The mother, who sacrificed her child, stood by, without any seeming sense of what she was losing, and without uttering a groan. If a sigh did

by chance escape, she lost all the honour which she proposed to herself in the offering, and the child was notwithstanding slain. All the time of this ceremony, while the children were murdering, there was a noise of clarions and tabors sounding before the idol, that the cries and shrieks of the victims might not be heard. "Tell me now (says Plutarch) if the monsters of old, the Typhons, and the giants, were to expel the gods, and to rule the world in their stead; could they require a service more horrid than these infernal rites and sacrifices?"

SACRILEGE, **SACRILEGIUM**, the crime of profaning sacred things, or things devoted to God; or of alienating to laymen, or common purposes, what was given to religious persons and pious uses.

SACRISTAN, a church-officer, otherwise called **SEXTON**.

SACRISTY, in church-history, an apartment in a church where the sacred utensils were kept, being the same with our **VESTRY**.

SADDLE, is a seat upon a horse's back, contrived for the conveniency of the rider.

A hunting-saddle is composed of two bows, two bands, fore-bolsters, pannels, and saddle-straps; and the great saddle has, besides these parts, corks, hind-bolsters, and a trousslequin.

The pommel is common to both.

SADDUCEES, were a famous sect among the ancient Jews, and consisted of persons of great quality and opulence. Respecting their origin there are various accounts and various opinions. Epiphanius, and after him many other writers, contend, that they took their rise from Dositheus a sectary of Samaria, and their name from the Hebrew word *צדק* *just* or *justice*, from the great justice and equity which they showed in all their actions; a derivation which neither suits the word *Sadducee* nor the general character of the sect. They are thought by some too to have been Samaritans; but this is by no means probable, as they always attended the worship and sacrifices at Jerusalem and never at Gerizzim.

In the Jewish Talmud we are told that the Sadducees derived their name from *Sadoc*, and that the sect arose about 260 years before Christ, in the time of Antigonus of Socho, president of the Sanhedrim at Jerusalem, and teacher of the law in the principal divinity school of that city. He had often in his lectures, it seems, taught his scholars, that they ought not to serve God as slaves do their masters, from the hopes of a reward, but merely out of filial love for his own sake; from which Sadoc and Baithus inferred that there were no rewards at all after this life. They therefore separated from their master, and taught that there was no resurrection nor future state. This new doctrine quickly spread, and gave rise to the sect of Sadducees, which in many respects resembled the **EPICUREANS**.

Dr Prideaux thinks, that the Sadducees were at first no more than what the Caraites are now; that is, they would not receive the traditions of the elders, but stuck to the written word only; and the Pharisees being great promoters of those traditions, hence these two sects became directly opposite to each other. See *Prideaux's Conn.* part. ii. b. 2 and 3. and see also **PHARISEES** and **CARAITES**.

Afterwards the Sadducees imbibed other doctrines, which

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Sadducees, which rendered them a sect truly impious; for they denied the resurrection of the dead, and the existence of angels, and of the spirits or souls of men departed (Mat. xxii. 23. Acts xxiii. 8.) They held, that there is no spiritual being but God only; that as to man, this world is his all. They did not deny but that we had reasonable souls: but they maintained this soul was mortal; and, by a necessary consequence, they denied the rewards and punishments of another life. They pretended also, that what is said of the existence of angels, and of a future resurrection, are nothing but illusions. St Epiphanius, and after him St Austin, have advanced, that the Sadducees denied the Holy Ghost. But neither Josephus nor the evangelists accuse them of any error like this. It has been also imputed to them, that they thought God corporeal, and that they received none of the prophecies.

It is pretty difficult to apprehend how they could deny the being of angels, and yet receive the books of Moses, where such frequent mention is made of angels and of their appearances. Grotius and M. Le Clerc observe, that it is very likely they looked upon angels, not as particular beings, subsisting of themselves, but as powers, emanations, or qualities, inseparable from the Deity, as the sun-beams are inseparable from the sun. Or perhaps they held angels not to be spiritual but mortal; just as they thought that substance to be which animates us and thinks in us. The ancients do not tell us how they solved this difficulty, that might be urged against them from so many passages of the Pentateuch, where mention is made of angels.

As the Sadducees acknowledged neither punishments nor recompenses in another life, so they were inexorable in their chastising of the wicked. They observed the law themselves, and caused it to be observed by others, with the utmost rigour. They admitted of none of the traditions, explications, or modifications, of the Pharisees; they kept only to the text of the law; and maintained, that only what was written was to be observed.

The Sadducees are accused of rejecting all the books of Scripture except those of Moses; and to support this opinion, it is observed, that our Saviour makes use of no Scripture against them, but passages taken out of the Pentateuch. But Scaliger produces good proofs to vindicate them from this reproach. He observes, that they did not appear in Israel till after the number of the holy books were fixed; and that if they had been to choose out of the canonical Scriptures, the Pentateuch was less favourable to them than any other book, since it often makes mention of angels and their apparition. Besides, the Sadducees were present in the temple and at other religious assemblies, where the books of the prophets were read indifferently as well as those of Moses. They were in the chief employs of the nation, many of them were even priests. Would the Jews have suffered in these employments persons that rejected the greatest part of their Scriptures? Menasse-ben-Israel says expressly, that indeed they did not reject the prophets, but that they explained them in a sense very different from that of the other Jews.

Josephus assures us, that they denied destiny or fate; alleging, that these were only sounds void of sense, and that all the good or evil that happens to us is in conse-

quence of the good or evil side we have taken, by the free choice of our will. They said also, that God was far removed from doing or knowing evil, and that man was the absolute master of his own actions. This was roundly to deny a providence; and upon this footing I know not, says F. Calmet, what could be the religion of the Sadducees, or what influence they could ascribe to God in things here below. However, it is certain they were not only tolerated among the Jews, but that they were admitted to the high-priesthood itself. John Hircanus, high-priest of that nation, separated himself in a signal manner from the sect of the Pharisees, and went over to that of Sadoc. It is said also, he gave strict command to all the Jews, on pain of death, to receive the maxims of this sect. Aristobulus and Alexander Jannæus, son of Hircanus, continued to favour the Sadducees; and Maimonides assures us, that under the reign of Alexander Jannæus, they had in possession all the offices of the Sanhedrim, and that there only remained of the party of the Pharisees, Simon the son of Secra. Caiaphas, who condemned Jesus Christ to death, was a Sadducee (Acts, v. 17. iv. 1.); as also Ananias the younger, who put to death St James the brother of our Lord. At this day, the Jews hold as heretics that small number of Sadducees that are to be found among them. See upon this matter *Serran. Tribares. Menasse ben-Israel, de Resurrectione mortuorum; Basnage's History of the Jews, &c.; and Calmet's Dissertation upon the Sects of the Jews before the Commentary of St Mark.*

The sect of the Sadducees was much reduced by the destruction of Jerusalem, and by the dispersion of the Jews; but it revived afterwards. At the beginning of the third century it was so formidable in Egypt, that Ammonius, Origen's master, when he saw them propagate their opinions in that country, thought himself obliged to write against them, or rather against the Jews, who tolerated the Sadducees, though they denied the fundamental points of their religion. The emperor Justinian mentions the Sadducees in one of his novels, banishes them out of all the places of his dominions, and condemns them to the severest punishments, as people that maintained atheistical and impious tenets; denying the resurrection and the last judgment. Ananias, or Ananias, a disciple of Juda, son of Nachman, a famous rabbin of the 8th century, declared himself, as it is said, in favour of the Sadducees, and strenuously protected them against their adversaries. They had also a celebrated defender in the 12th century, in the person of Alfarag a Spanish rabbin. This doctor wrote against the Pharisees, the declared enemies of the Sadducees; and maintained by his public writings, that the purity of Judaism was only to be found among the Sadducees; that the traditions avowed by the Pharisees were useless; and that the ceremonies, which they had multiplied without end, were an insupportable yoke. The rabbi Abraham-ben-David Italeri replied to Alfarag, and supported the sect of the Pharisees by two great arguments, that of their universality and that of their antiquity. He proved their antiquity by a continued succession from Adam down to the year 1167; and their universality, because the Pharisees are spread all the world over, and are found in all the synagogues. There are still Sadducees in Africa and in several other places. They deny the immortality of the soul, and the

Sadler
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Saffron.

the resurrection of the body; but they are rarely found, at least there are but few who declare themselves for these opinions.

SADLER (John), was descended from an ancient family in Shropshire; born in 1615; and educated at Cambridge, where he became eminent for his great knowledge in the oriental languages. He removed to Lincoln's-Inn, where he made no small progress in the study of the law; and in 1644 was admitted one of the masters in chancery, as also one of the two masters of requests. In 1649 he was chosen town-clerk of London, and the same year published his *Rights of the Kingdom*. He was greatly esteemed by Oliver Cromwell, by whose special warrant he was continued a master in Chancery, when their number was reduced to six. By his interest it was that the Jews obtained the privilege of building for themselves a synagogue in London. In 1658 he was made member of parliament for Yarmouth; and next year was appointed first commissioner under the great seal with Mr Taylor, Mr Whitelocke, and others, for the probate of wills. In 1660 he published his *Olbia*. Soon after the Restoration, he lost all his employments. In the fire of London in 1666, he was a great sufferer; which obliged him to retire to his seat of Warmwell in Dorsetshire, where he lived in a private manner till 1674, when he died.

SADOC, a famous Jewish rabbi, and founder of the sect of the SADDUCEES.

SADOLET (James), a polite and learned cardinal of the Romish church, born at Modena in 1477. Leo X. made him and Peter Bembo his secretaries, an office for which they were both well qualified; and Sadolet was soon after made bishop of Carpentras, near Avignon: he was made a cardinal in 1536 by Paul III. and employed in several negotiations and embassies. He died in 1547, not without the suspicion of poison, for corresponding too familiarly with the Protestants, and for testifying too much regard for some of their doctors. His works, which are all in Latin, were collected in 1607 at Mentz, in one volume 8vo. All his contemporaries spoke of him in the highest terms.

SAFE-GUARD, a protection formerly granted to a stranger who feared violence from some of the king's subjects for seeking his right by course of law.

SAFE-Conduct, is a security given by a prince under the great seal, to a stranger for his *safe-coming* into and passing out of the realm; the form whereof is in *Reg. Orig.* 25. There are letters of safe conduct which must be enrolled in chancery; and the persons to whom granted must have them ready to show; and touching which there are several statutes. See *PREROGATIVE*.

SAFFRON, in the materia medica, is formed of the stigmata of the crocus officinalis*, dried on a kiln, and pressed together into cakes. Of this there are two kinds, the English and Spanish; of which the latter is by far the most esteemed. Saffron is principally cultivated in Cambridgeshire, in a circle of about ten miles diameter. The greatest part of this tract is an open level country, with few inclosures; and the custom there is, as in most other places, to crop two years, and let the land be fallow the third. Saffron is generally planted upon fallow-ground, and, all other things being alike, they prefer that which has borne barley the year before.

The saffron ground is seldom above three acres, or less than one; and in choosing, the principal thing they have regard to is, that they be well exposed, the soil not poor, nor a very stiff clay, but a temperate dry mould, such as commonly lies upon chalk, and is of an hazel colour; though, if every thing else answers, the colour of the mould is pretty much neglected.

The ground being made choice of, about Lady-day or the beginning of April, it must be carefully ploughed, the furrows being drawn much closer together, and deeper if the soil will allow it, than is done for any kind of corn; and accordingly the charge is greater.

About five weeks after, during any time in the month of May, they lay between 20 and 30 loads of dung upon each acre, and having spread it with great care, they plough it in as before. The shortest rotten dung is the best; and the farmers, who have the conveniency of making it, spare no pains to make it good, being sure of a proportionable price for it. About midsummer they plough a third time, and between every 16 feet and an half they leave a broad furrow or trench, which serves both as a boundary to the several parcels, and for throwing the weeds into at the proper season. The time of planting is commonly in the month of July. The only instrument used at this time is a small narrow spade, commonly called a *spit-shovel*. The method is this: One man with his shovel raises about three or four inches of earth, and throws it before him about six or more inches. Two persons, generally women, follow with roots, which they place in the farthest edge of the trench made by the digger, at about three inches from each other. As soon as the digger has gone once the breadth of the ridge, he begins again at the other side; and, digging as before, covers the roots last set, which makes room for another row of roots at the same distance from the first that they are from one another. The only dexterity necessary in digging is, to leave some part of the first stratum of earth untouched, to lie under the roots; and, in setting, to place the roots directly upon their bottom. The quantity of roots planted on an acre is generally about 16 quarters, or 128 bushels. From the time of planting till the beginning of September, or sometimes later, there is no more labour required; but at that time they begin to vegetate, and are ready to show themselves above ground, which may be known by digging up a few of the roots. The ground is then to be pared with a sharp hoe, and the weeds raked into the furrows, otherwise they would hinder the growth of the saffron. In some time after, the flowers appear.

They are gathered before they are full blown, as well as after, and the proper time for it is early in the morning. The owners of the saffron-fields get together a sufficient number of hands, who pull off the whole flowers, and throw them by handfuls into a basket, and so continue till about 11 o'clock. Having then carried home the flowers, they immediately fall to picking out the stigmata or chives, and together with them a pretty large proportion of the stylus itself, or string to which they are attached: the rest of the flower they throw away as useless. Next morning they return to the field, without regarding whether the weather be wet or dry; and so on daily, even on Sundays, till the whole crop is gathered.—The next labour is to dry the chives on the kiln. The kiln is built upon a thick plank

Saffron.

* See Cro.
cu.

Saffron.

plank, that it may be moved from place to place. It is supported by four short legs: the outside consists of eight pieces of wood of three inches thick, in form of a quadrangular frame, about 12 inches square at the bottom on the inside, and 22 on the upper part; which last is likewise the perpendicular height of it. On the fore-side is left a hole of about eight inches square, and four inches above the plank, through which the fire is put in; over all the rest laths are laid pretty thick, close to one another, and nailed to the frame already mentioned. They are then plastered over on both sides, as are also the planks at bottom, very thick, to serve for an hearth. Over the mouth is laid a hair-cloth, fixed to the edges of the kiln, and likewise to two rollers or moveable pieces of wood, which are turned by wedges or screws, in order to stretch the cloth. Instead of the hair-cloth, some people use a net-work or iron-wire, by which the saffron is sooner dried, and with less fuel; but the difficulty of preserving it from burning makes the hair-cloth preferred by the best judges. The kiln is placed in a light part of the house; and they begin with putting five or six sheets of white paper on the hair-cloth, and upon these they lay out the wet saffron two or three inches thick. It is then covered with some other sheets of paper, and over these they lay a coarse blanket five or six times doubled, or instead of this, a canvas pillow filled with straw; and after the fire has been lighted for some time, the whole is covered with a board having a considerable weight upon it. At first they apply a pretty strong heat, to make the chives *sweat* as they call it; and at this time a great deal of care is necessary to prevent burning. When it has been thus dried about an hour, they turn the cakes of saffron upside down, putting on the coverings and weight as before. If no sinister accident happens during these first two hours, the danger is thought to be over; and nothing more is requisite than to keep up a very gentle fire for 24 hours, turning the cake every half hour. That fuel is best which yields the least smoke; and for this reason charcoal is preferable to all others.

The quantity of saffron produced at a crop is uncertain. Sometimes five or six pounds of wet chives are got from one rood, sometimes not above one or two; and sometimes not so much as is sufficient to defray the expence of gathering and drying. But it is always observed, that about five pounds of wet saffron go to make one pound of dry for the first three weeks of the crop, and six pounds during the last week. When the heads are planted very thick, two pounds of dry saffron may at a medium be allowed to an acre for the first crop, and 24 pounds for the two remaining ones, the third being considerably larger than the second.

To obtain the second and third crops, the labour of hoeing, gathering, picking, &c. already mentioned, must be repeated; and about midsummer, after the third crop is gathered, the roots must all be taken up and transplanted. For taking up the roots, sometimes the plough is made use of, and sometimes a forked hoe; and then the ground is harrowed once or twice over. During all the time of ploughing, harrowing, &c. 15 or more people will find work enough to follow and gather the heads as they are turned up. The roots are next to be carried to the house in sacks, where they are cleaned and rased. This labour consists in cleaning the roots

thoroughly from earth, decayed old pieces, involucra, or excrescences; after which they become fit to be planted in new ground immediately, or they may be kept for some time, without danger of spoiling. The quantity of roots taken up in proportion to those planted is uncertain; but, at a medium, 24 quarters of clean roots, fit to be planted, may be had from each acre.— There sometimes happens a remarkable change in the roots of saffron and some other plants. As soon as they begin to shoot upwards, there are commonly two or three large tap-roots sent forth from the side of the old one, which will run two or three inches deep into the ground. At the place where these bulbs first come out from, the old one will be formed sometimes, though not always, and the tap-root then decays. The bulb increases in bigness, and at last falls quite off; which commonly happens in April. But many times these tap-roots never produce any bulbs, and remain barren for ever after. All such roots therefore should be thrown away in the making a new plantation. This degeneracy of the roots is a disease for which no cure is as yet known.

When saffron is offered to sale, that kind ought to be chosen which has the broadest blades; this being the mark by which English saffron is distinguished from the foreign. It ought to be of an orange or fiery-red colour, and to yield a dark yellow tincture. It should be chosen fresh, not above a year old, in close cakes, neither dry nor yet very moist, tough and firm in tearing, of the same colour within as without, and of a strong, acrid, diffusive smell.

This drug has been reckoned a very elegant and useful aromatic. Besides the virtues it has in common with other substances of that class, it has been accounted one of the highest cordials, and is said to exhilarate the spirits to such a degree as, when taken in large doses, to occasion immoderate mirth, involuntary laughter, and the ill effects which follow from the abuse of spirituous liquors. This medicine is particularly serviceable in hysteric depressions proceeding from a cold cause or obstruction of the uterine secretions, where other aromatics, even those of the more generous kind, have little effect. Saffron imparts the whole of its virtue and colour to rectified spirit, proof-spirit, wine, vinegar, and water. A tincture drawn with vinegar loses greatly of its colour in keeping: the watery and vinous tinctures are apt to grow sour, and then lose their colour also: that made in pure spirit keeps in perfection for many years.

Meadow-Saffron. See COLCHICUM.

SAGAN, in scripture-history, the suffragan or deputy of the Jewish high priest. According to some writers, he was only to officiate for him when he was rendered incapable of attending the service through sickness or legal uncleanness on the day of expiation; or, according to others, he was to assist the high-priest in the care of the affairs of the temple and the service of the priests.

SAGAPENUM, in pharmacy, &c. a gum-resin brought to us in two forms; the finer and purer is in loose granules or single drops; the coarser kind is in masses composed of these drops of various sizes, cemented together by a matter of the same kind. In either case, it is of a firm and compact substance, considerably heavy, and of a reddish colour on the outside, brownish within,

Saffron
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Sagape-
num.

Sage. within, and spotted in many places with small yellowish or whitish specks. Its smell is strong and disagreeable; its taste acrid and unpleasant.

It is brought to us from Persia and the East Indies. The plant which produces it has never been described; but is supposed to be, as Dioscorides says, of the ferula kind, from the seeds and fragments of the stalks sometimes met with in the body of it.

Sagapenum is a very great attenuant, aperient, and discutient. It is good in all disorders of the breast that owe their origin to a tough phlegm. It has also been found to discuss tumors in the nervous parts in a remarkable manner; and to give relief in habitual headaches, where almost all things else have failed. Its dose is from ten grains to two scruples; but it is now seldom given alone. It has been found, however, to do great things in asthma; in obstructions of the viscera, particularly the spleen; in nervous complaints; and even in epilepsies. It also promotes the menses, and expels the secundines; and is an ingredient in the theriaca, mithridate, and many other of the shop compositions.

SAGE, in botany. See SALVIA.

SAGE (Alain Rene), an ingenious French romance-writer, was born at Ruys in Brittany in the year 1667. He had a fine flow of imagination, was a complete master of the French and Spanish languages, and wrote several admired romances in imitation of the Spanish authors. These were, *The Bachelor of Salamanca*, 2 vols 12mo; *New Adventures of Don Quixote*, 2 vols 12mo; *The Devil on Two Sticks*, 2 vols 12mo; and *Gil Blas*, 4 vols 12mo. He produced also some comedies, and other pieces of pleasantry; and died in 1747, in a little house near Paris, where he supported himself by writing.

SAGE (the reverend John), so justly admired by all who knew him for his classical learning and reasoning powers, was born, in 1652, in the parish of Creich and county of Fife, North Britain, where his ancestors had lived for seven generations with great respect though with little property. His father was a captain in Lord Duffus's regiment, and fought for his king and country when Monk stormed Dundee on the 30th of August 1651.

The issue of the civil wars, and the loyalty of captain Sage, left him nothing to bestow upon his son but a liberal education and his own principles of piety and virtue. In those days the Latin language was taught in the parochial schools of Scotland with great ability and at a trifling expence; and after young Sage had acquired a competent knowledge of that language at one of those useful seminaries, his father, without receiving from an ungrateful court any recompense for what he had lost in the cause of royalty, was still able to send him to the university of St Andrew's, where having remained in college the usual number of terms or sessions, and performed the exercises required by the statutes, he was admitted to the degree of master of arts, the highest honour which it appears he ever received from any university.

During his residence in St Andrew's he studied the Greek and Roman authors with great diligence, and was likewise instructed in logic, metaphysics, and such other branches of philosophy as then obtained in the schools, which, though we affect to smile at them in this enlightened age, he always spoke of as highly use-

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ful to him who would understand the poets, historians, and orators of ancient Greece, and even the fathers of the Christian church. In this opinion every man will agree with him who is at all acquainted with the ancient metaphysics, and has read the writings of Clements Alexandrinus, Origen, Tertullian, Chrysostome, and other fathers of great name; for each of those writers adopted the principles of some one or other of the philosophical sects, reasoned from their notions, and often made use of their terms and phrases.

When Mr Sage had taken his master's degree, the narrowness of his fortune compelled him to accept of the first literary employment which was offered to him; and that happened to be nothing better than the office of schoolmaster in the parish of Bingry in Fifeshire, whence he was soon removed to Tippermuir in the county of Perth. In these humble stations, though he wanted many of the necessaries and almost all the comforts of life, he prosecuted his studies with great success; but in doing so, he unhappily imbibed the seeds of several diseases which afflicted him through life, and notwithstanding the native vigour of his constitution impaired his health and shortened his days. From the miserable drudgery of a parish-schoolmaster, he was relieved by Mr Drummond of Cultmalundie, who invited him to superintend the education of his sons, whom he accompanied first to the public school at Perth, and afterwards to the university of St Andrew's. This was still an employment by no means adequate to his merit, but it was not wholly without advantages. At Perth he gained the friendship and esteem of Dr Rose, afterwards lord bishop of Edinburgh, and at St Andrew's of every man capable of properly estimating genius and learning.

The education of his pupils was completed in 1684, when he was left with no determinate object of pursuit. In this moment of indecision, his friend Dr Rose, who had been promoted from the parsonage of Perth to the professorship of divinity in the university which he was leaving, recommended him so effectually to his uncle then archbishop of Glasgow, that he was by that prelate admitted into orders and presented to one of the churches in the city. He was then about 34 years of age, had studied the Scriptures with great assiduity, was no stranger to ecclesiastical history, or the apologies and other writings of the ancient fathers, was thorough master of school-divinity, had examined with great accuracy the modern controversies, especially those between the Romish and reformed churches, and between the Calvinists and Remonstrants; and it was perhaps to his honour that he did not fully approve of all the articles of faith subscribed by any one of these contending sects of Christians.

A man so far advanced in life, and so thoroughly accomplished as a scholar, would naturally be looked up to by the greater part of the clergy as soon as he became one of their body. This was in fact the case: Mr Sage was, immediately on his admission into orders, appointed clerk to the synod or presbytery of Glasgow; an office of great trust and respectability, to which we know nothing similar in the church of England.

During the establishment of episcopacy in Scotland, from the restoration of Charles II. till the year 1690, the authority of the bishops, though they possessed the

Sage. sole power of ordination, was very limited in the government of the church. They did every thing with the consent of the presbyters over whom they presided. Diocesan synods were held at stated times for purposes of the same kind with those which employ the meetings of presbyteries at present (see PRESBYTERIANS), and the only prerogative which the bishop seems to have enjoyed was to be permanent president, with a negative voice over the deliberations of the assembly. The acts of each synod, and sometimes the charge delivered by the bishop at the opening of it, were registered in a book kept by the clerk, who was always one of the most eminent of the diocesan clergy.

Mr Sage continued in this office, discharging in Glasgow all the duties of a clergyman, in such a manner as endeared him to his flock, and gained him the esteem even of those who were dissenters from the establishment. Many of his brethren were trimmers in ecclesiastical as well as in civil politics. They had been republicans and presbyterians in the days of the covenant; and, with that ferocious zeal which too often characterizes interested converts, had concurred in the severities which, during the reign of Charles II. were exercised against the party whom they had forsaken at his restoration. When that party again raised its head during the infatuated reign of James, and every thing indicated an approaching change of the establishment, those whose zeal for the church had so lately incited them to persecute the dissenters suddenly became all gentleness and condescension, and advanced towards the presbyterians as to their old friends.

The conduct of Mr Sage was the reverse of this. He was an episcopalian and a royalist from conviction: and in all his discourses public and private he laboured to instil into the minds of others the principles which to himself appeared to have their foundation in truth. To persecution he was at all times an enemy, whilst he never tamely betrayed through fear what he thought it his duty to maintain. The consequence was, that in the end of the year 1688 he was treated by the rabble, which in the western counties of Scotland rose against the established church, with greater lenity than his more complying brethren. Whilst they, without the smallest apprehension of their danger, were torn from their families by a lawless force, and many of them persecuted in the cruellest manner, he was privately warned to withdraw from Glasgow, and never more to return to that city. So much was consistency of conduct and a steady adherence to principle respected by those who seemed to respect nothing else.

Mr Sage retired to the metropolis, and carried with him the synodical book, which was afterwards demanded by the presbytery of Glasgow, but not recovered till about three or four years ago, that, on the death of a nephew of Dr Rose the last established bishop of Edinburgh, it was found in his possession, and restored to the presbytery to which it belonged. Mr Sage had detained it and given it to his diocesan and friend, from the fond hope that episcopacy would soon be re-established in Scotland; and it was doubtless with a view to contribute what he could to the realising of that hope, that, immediately on his being obliged to leave Glasgow, he commenced a keen polemical writer. At Edinburgh he preached a while, till refusing to take the oaths of allegiance when required by the govern-

ment, he was obliged to retire. In this extremity, he found protection in the house of Sir William Bruce, the sheriff of Kinross, who approved his principles and admired his virtue. Returning to Edinburgh, in 1695, he was observed, and obliged to abscond. Yet he returned in 1696, when his friend Sir William Bruce was imprisoned as a suspected person. He was soon forced to look for refuge in the hills of Angus, under the name of Jackson.

After a while Mr Sage found a safe retreat with the countess of Callendar, who employed him to instruct her family as chaplain, and her sons as tutor. These occupations did not wholly engage his active mind: for he employed his pen in defending his order, or in exposing his oppressors. When the countess of Callendar had no longer sons to instruct, Sage accepted the invitation of Sir John Steuart of Garntully, who wanted the help of a chaplain, and the conversation of a scholar. With Sir John he continued till the decency of his manners, and the extensiveness of his learning, recommended him to a higher station. And, on the 25th of January 1705, he was consecrated a bishop by Paterson the archbishop of Glasgow, Rose the bishop of Edinburgh, and Douglas the bishop of Dumblain. But this promotion did not prevent sickness from falling on him in November 1706. After lingering for many months in Scotland, he tried the effect of the waters of Bath in 1709, without success. At Bath and at London he remained a twelvemonth, recognised by the great and caressed by the learned. Yet though he was invited to stay, he returned in 1710 to his native country, which he desired to see, and where he wished to die. And though his body was debilitated, he engaged, with undiminished vigour of mind, in the publication of the works of Drummond of Hawthornden, to which the celebrated Ruddiman lent his aid. Bishop Sage died at Edinburgh on the 7th of June 1711, lamented by his friends for his virtues, and feared by his adversaries for his talents.

His works are, 1st, Two Letters concerning the Persecution of the Episcopal Clergy in Scotland, which with other two by different authors were printed in one volume at London in 1689. 2dly, An Account of the late Establishment of Presbyterian Government by the Parliament of Scotland, in 1690, London, 1693. 3dly, The Fundamental Charter of Presbytery, London, 1695. 4thly, The Principles of the Cyprianick Age with regard to Episcopal Power and Jurisdiction, London, 1695. 5thly, A Vindication of the Principles of the Cyprianick Age, London, 1701. 6thly, Some Remarks on the Letter from a Gentleman in the City, to a minister in the Country, on Mr David Williamson's Sermon before the General Assembly, Edinburgh, 1703. 7thly, A Brief Examination of some Things in Mr Meldrum's Sermon, preached on the 16th of May 1703, against a Toleration to those of the Episcopal Persuasion, Edinburgh, 1703. 8thly, The Reasonableness of a Toleration of those of the Episcopal Persuasion inquired into purely on Church Principles, Edinburgh, 1704. 9thly, The Life of Gawin Douglas, in 1710. 10thly, An introduction to Drummond's History of the Five James's, Edinburgh, 1711. Of the principles maintained in these publications, different readers will think very differently; and it is probable that the acrimony displayed in some of them will be

Sagene
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Sago.

be generally condemned in the present day; whilst the learning and acuteness of their author will be universally acknowledged and admired by all who can distinguish merit in a friend or an adversary.

SAGENE, a Russian long measure, 500 of which make a verst: the sagene is equal to seven English feet.

SAGINA, in botany: A genus of the tetragynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the 22d order, *Garyophyllei*. The calyx is tetraphyllous; the petals four; the capsule is unilocular, quadrivalved, and polyspermous.

SAGITTARIA, ARROW-HEAD: A genus of the polyandria order, belonging to the monœcia class of plants; and in the natural method ranking under the fifth order, *Tripelatoideæ*. The male calyx is triphyllous; the corolla tripetalous; the filaments generally about 14; the female calyx is triphyllous; the corolla tripetalous; many pistils; and many naked seeds. There are four species, of which the most remarkable is the sagittifolia, growing naturally in many parts of England. The root is composed of many strong fibres, which strike into the mud; the footstalks of the leaves are in length proportionable to the depth of the water in which they grow; so they are sometimes almost a yard long: they are thick and fungous; the leaves, which float upon the water, are shaped like the point of an arrow, the two ears at their base spreading wide asunder, and are very sharp-pointed. The flowers are produced upon long stalks which rise above the leaves, standing in whorls round them at the joints. They consist of three broad white petals, with a cluster of stamina in the middle, which have purple summits. There is always a bulb at the lower part of the root, growing in the solid earth beneath the mud. This bulb constitutes a considerable part of the food of the Chinese; and upon that account they cultivate it. Horses, goats, and swine, eat it; cows are not fond of it.

SAGITTARIUS, in astronomy, the name of one of the 12 signs of the zodiac.

SAGO, a simple brought from the East Indies, of considerable use in diet as a restorative. It is produced from a species of palm-tree (*Cycas circinalis*, L.) growing spontaneously in the East Indies without any culture. The progress of its vegetation in the early stages is very slow. At first it is a mere shrub, thick set with thorns, which makes it difficult to come near it; but as soon as its stem is once formed, it rises in a short time to the height of 30 feet, is about six feet in circumference, and imperceptibly loses its thorns. Its ligneous bark is about an inch in thickness, and covers a multitude of long fibres; which, being interwoven one with another, envelope a mass of a gummy kind of meal. As soon as this tree is ripe, a whitish dust, which transpires through the pores of the leaves, and adheres to their extremities, proclaims its maturity. The Malais then cut them down near the root, divide them into several sections, which they split into quarters: they then scoop out the mass of mealy substance, which is enveloped by and adheres to the fibres; they dilute it in pure water, and then pass it through a straining bag of fine cloth, in order to separate it from the fibres. When this paste has lost part of its moisture by evaporation, the Malais throw it into a kind of earthen vessels, of different shapes, where they allow it to dry and hard-

en. This paste is wholesome nourishing food, and preserves for many years. The Indians eat it diluted with water, and sometimes baked or boiled. Through a principle of humanity, they reserve the finest part of this meal for the aged and infirm. A jelly is sometimes made of it, which is white and of a delicious flavour.

SAGUM, in Roman antiquity, a military habit, open from top to bottom, and usually fastened on the right shoulder with a buckle or clasp. It was not different in shape from the *chlamys* of the Greeks and the *paludamentum* of the generals. The only difference between them was, that the paludamentum was made of a richer stuff, was generally of a purple colour, and both longer and fuller than the sagum.

SAGUNTUM, an ancient town of Spain, now called *Morvedro*, where there are still the ruins of a Roman amphitheatre to be seen. The new town is seated on a river called *Morvedro*, 15 miles to the north of Valencia, in E. Long. 0. 10. N. Lat. 39. 38. It was taken by Lord Peterborough in 1706.

SAICK, or SAIQUE, a Turkish vessel, very common in the Levant for carrying merchandize.

SAIDE, the modern name of Sidon. See SIDON.

SAIL, in navigation, an assemblage of several breadths of canvas sewed together by the lifts, and edged round with cord, fastened to the yards of a ship, to make it drive before the wind. See SHIP.

The edges of the cloths, or pieces, of which a sail is composed, are generally sewed together with a double seam; and the whole is skirted round at the edges with a cord, called the *bolt-rope*.

Although the form of sails is extremely different, they are all nevertheless triangular or quadrilateral figures; or, in other words, their surfaces are contained either between three or four sides.

The former of these are sometimes spread by a yard, as lateen-sails; and otherwise by a stay, as stay-sails; or by a mast, as shoulder-of-mutton sails; in all which cases the foremost leech or edge is attached to the said yard, mast, or stay, throughout its whole length. The latter, or those which are four-sided, are either extended by yards, as the principal sails of a ship; or by yards and booms, as the studding-sails, drivers, ring-tails, and all those sails which are set occasionally; or by gaffs and booms, as the main-sails of sloops and brigantines.

The principal sails of a ship (Plate CCCCXLIV. fig. 2.) are the courses or lower sails *a*; the top-sails *b*, which are next in order above the courses; and the top-gallant sails *c*, which are expanded above the top-sails.

The courses are the main-sail, fore-sail, and mizen, main stay-sail, fore stay-sail, and mizen stay-sail: but more particularly the three first. The main-stay sail is rarely used except in small vessels.

In all quadrangular sails the upper edge is called the *head*; the sides or skirts are called *leeches*; and the bottom or lower edge is termed the *foot*. If the head is parallel to the foot, the two lower corners are denominated *clues*, and the upper corners earings.

In all triangular sails, and in those four-sided sails wherein the head is not parallel to the foot, the foremost corner at the foot is called the *tack*, and the after lower-corner the *clue*; the foremost perpendicular or sloping edge is called the *fore-leech*, and the hindmost the *after-leech*.

Sagum
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Sail.

Sail.

The heads of all four-sided sails, and the fore-leeches of lateen-sails, are attached to their respective yard or gaff by a number of small cords called *ro-bands*; and the extremities are tied to the yard-arms, or to the peak of the gaff, by earings.

The stay-sails are extended upon stays between the masts, whereon they are drawn up or down occasionally, as a curtain slides upon its rod, and their lower parts are stretched out by a tack and sheet. The clues of a top-sail are drawn out to the extremities of the lower yard, by two large ropes called the *top-sail sheets*; and the clues of the top-gallant sails are in like manner extended upon the top-sail yard-arms, as exhibited by fig. 2.

The studding-sails are set beyond the leeches or skirts of the main-sail and fore-sail, or of the top-sails or top-gallant sails of a ship. Their upper and lower edges are accordingly extended by poles run out beyond the extremities of the yards for this purpose. Those sails, however, are only set in favourable winds and moderate weather.

All sails derive their name from the mast, yard, or stay, upon which they are extended. Thus the principal sail extended upon the main-mast is called the *main-sail*, *d*; the next above, which stands upon the main-top mast, is termed the *main-top sail*, *e*; and the highest, which is spread across the main-top-gallant mast, is named the *main-top-gallant sail*, *f*.

In the same manner there is the fore-sail, *g*; the fore top-sail, *h*; and the fore-top-gallant-sail, *i*; the mizen, *k*; the mizen top-sail, *l*; and mizen top-gallant-sail, *m*. Thus also there is the main-stay-sail, *o*; main-top-mast stay-sail, *p*; and main-top-gallant stay-sail, *q*; with a middle stay-sail which stands between the two last.

N. B. All these stay-sails are between the main and fore-masts.

The stay-sails between the main-mast and mizen-mast are the mizen stay-sail, *r*; and the mizen top-mast stay-sail, *s*; and sometimes a mizen top-gallant stay-sail above the latter.

The stay-sails between the foremast and the bowsprit are the fore stay-sail, *t*; the fore top-mast stay-sail *u*; and the jib, *x*. There is besides two square sails extended by yards under the bow-sprit, one of which is called the *sprit-sail*, *y*; and the other the *sprit-sail top-sail*, *z*.

The studding-sails being extended upon the different yards of the main-mast and fore-mast, are likewise named according to their stations, the *lower*, *top-mast*, or *top-gallant studding sails*.

The ropes by which the lower yards of a ship are hoisted up to their proper height on the masts, are called the *jeers*. In all other sails the ropes employed for this purpose are called *haliards*.

The principal sails are then expanded by haliards, sheets, and bowlines; except the courses, which are always stretched out below by a tack and sheet. They are drawn up together, or trussed up, by bunt-lines, clue-lines, *dd*; leech-lines, *ee*; reef-tackles, *ff*; slab-line, *g*; and spiling-lines. As the bunt-lines and leech-lines pass on the other side of the sail, they are expressed by the dotted lines in the figure.

The courses, top-sails, and top-gallant sails, are wheeled about the mast, so as to suit the various direc-

tions of the wind by braces. The higher studding sails, and in general all the stay-sails, are drawn down, so as to be furled, or taken in, by down-hauls.

Some experienced sail-makers contend, that it would be of much advantage if many of the sails of ships were made of equal magnitude; in which case, when necessity required it, they could be interchangeably used. For example, as the mizen top-sail is now made nearly as large as the main top-gallant sail, it would be easy to make the yards, masts, and sails, so as mutually to suit each other. The main and fore-top sails differ about two feet at head and foot, and from one to three feet in depth. These likewise could be easily made alike, and in some cases they are so. The same may be said of the main and fore top-gallant sails, and of the mizen top-gallant sail, and main fore-royal. The main-sail and fore-sail might also, with respect to their head, be made alike; but as the former has a gore at the leech, and a larger gore at the foot for clearing it of the galls, boats, &c. which the latter has not, there might be more difficulty in arranging them. The difficulty, however, appears not to be insurmountable. These alterations, it is thought, would be extremely useful in the event of losing sails by stress of weather. Fewer sails would be thus necessary, less room would be required to stow them, and there would be less danger of confusion in taking them out. But perhaps the utility of these alterations will be more felt in the merchant-service than in the navy, which latter has always a large store of spare sails, and sufficient room to stow them in order. Thus, too, spare yards and masts might be considerably reduced in number, and yet any casual damages more easily repaired at sea. Top-mast studding sails are occasionally substituted for awnings, and might, by a very little attention in planning the rigging of a ship, be so contrived as to answer both purposes. See SHIP-BUILDING.

SAIL is also a name applied to any vessel beheld at a distance under sail.

To set SAIL, is to unfurl and expand the sails upon their respective yards and stays, in order to begin the action of sailing.

To Make SAIL, is to spread an additional quantity of sail, so as to increase the ship's velocity.

To shorten SAIL, is to reduce or take in part of the sails, with an intention to diminish the ship's velocity.

To Strike SAIL, is to lower it suddenly. This is particularly used in saluting or doing homage to a superior force, or to one whom the law of nations acknowledges as superior in certain regions. Thus all foreign vessels strike to a British man of war in the British seas.

SAILING, the movement by which a vessel is wafted along the surface of the water, by the action of the wind upon her sails.

When a ship changes her state of rest into that of motion, as in advancing out of a harbour, or from her station at anchor, she acquires her motion very gradually, as a body which arrives not at a certain velocity till after an infinite repetition of the action of its weight.

The first impression of the wind greatly affects the velocity, because the resistance of the water might destroy it; since the velocity being but small at first, the

Sail.

Sail. resistance of the water which depends on it will be very feeble: but as the ship increases her motion, the force of the wind on the sails will be diminished; whereas, on the contrary, the resistance of the water on the bow will accumulate in proportion to the velocity with which the vessel advances. Thus the repetition of the degrees of force, which the action of the sails adds to the motion of the ship, is perpetually decreasing; whilst, on the contrary, the new degrees added to the effort of resistance on the bow are always augmenting. The velocity is then accelerated in proportion as the quantity added is greater than that which is subtracted; but when the two powers become equal; when the impression of the wind on the sails has lost so much of its force, as only to act in proportion to the opposite impulse of resistance on the bow, the ship will then acquire no additional velocity, but continue to sail with a constant uniform motion. The great weight of the ship may indeed prevent her from acquiring her greatest velocity; but when she has attained it, she will advance by her own intrinsic motion, without gaining any new degree of velocity, or lessening what she has acquired. She moves then by her own proper force *in vacuo*, without being afterwards subject either to the effort of the wind on the sails, or to the resistance of the water on the bow. If at any time the impulsion of the water on the bow should destroy any part of the velocity, the effort of the wind on the sails will revive it, so that the motion will continue the same. It must, however, be observed, that this state will only subsist when these two powers act upon each other in direct opposition; otherwise they will mutually destroy one another. The whole theory of working ships depends on this counter action, and the perfect equality which should subsist between the effort of the wind and the impulsion of the water.

The effect of sailing is produced by a judicious arrangement of the sails to the direction of the wind. Accordingly the various modes of sailing are derived from the different degrees and situations of the wind with regard to the course of the vessel. See SEAMANSHIP.

To illustrate this observation by examples, the plan of a number of ships proceeding on various courses are represented by fig. 3. which exhibits the 32 points of the compass, of which C is the centre; the direction of the wind, which is northerly, being expressed by the arrow.

It has been observed in the article *CLOSE-HAULED*, that a ship in that situation will sail nearly within six points of the wind. Thus the ships B and y are close-hauled; the former being on the larboard-tack, steering E. N. E. and the latter on the starboard tack, sailing W. N. W. with their yards *ab* braced obliquely, as suitable to that manner of sailing. The line of battle on the larboard tack would accordingly be expressed by CB, and on the starboard by Cy.

When a ship is neither close-hauled, nor steering afore the wind, she is in general said to be sailing large. The relation of the wind to her course is precisely determined by the number of points between the latter and the course close-hauled. Thus the ships *c* and *x* have the wind one point large, the former steering E. *b* N. and the latter W. *b* N. The yards remain al-

most in the same position as in B and y; the bowlines and sheets of the sails being only a little slackened.

The ships *d* and *u* have the wind two points large, the one steering east and the other west. In this manner of sailing, however, the wind is more particularly said to be upon the beam, as being at right angles with the keel, and coinciding with the position of the ship's beams. The yards are now more across the ship, the bowlines are cast off, and the sheets more relaxed; so that the effort of the wind being applied nearer to the line of the ship's course, her velocity is greatly augmented.

In *e* and *t* the ships have the wind three points large, or one point abaft the beam, the course of the former being E. *b* S. and that of the latter W. *b* S. The sheets are still more flowing, the angle which the yards make with the keel further diminished, and the course accelerated in proportion.

The ships *f* and *j*, the first of which steers E. S. E. and the second W. S. W. have the wind four points large, or two points abaft the beam. In *g* and *r* the wind is five points large, or three points abaft the beam, the former sailing S. E. *b* E. and the latter S. W. *b* W. In both these situations the sheets are still farther slackened, and the yards laid yet more athwart the ship's length, in proportion as the wind approaches the quarter.

The ships *h* and *q*, steering S. E. and S. W. have the wind six points large, or more properly on the quarter; which is considered as the most favourable manner of sailing, because all the sails co-operate to increase the ship's velocity: whereas, when the wind is right aft, as in the ship *m*, it is evident that the wind in its passage to the foremost sails will be intercepted by those which are farther aft. When the wind is on the quarter, the fore-tack is brought to the cat-head; and the main-tack being cast off, the weather-clue of the main-sail is hoisted up to the yard, in order to let the wind pass freely to the fore-sail; and the yards are disposed so as to make an angle of about two points, or nearly 22° , with the keel.

The ships *i* and *p*, of which the former sails S. E. *b* S. and the latter S. W. *b* S. are said to have the wind three points on the larboard or starboard quarter: and those expressed by *k* and *o*, two points; as steering S. S. E. and S. S. W. in both which positions the yards make nearly an angle of 16° , or about a point and an half, with the ship's length.

When the wind is one point on the quarter, as in the ships *l* and *n*, whose courses are S. *b* E. and S. *b* W. the situation of the yards and sails is very little different from the last mentioned; the angle which they make with the keel being somewhat less than a point, and the stay-sails being rendered of very little service. The ship *m* sails right afore the wind, or with the wind right aft. In this position the yards are laid at right angles with the ship's length: the stay-sails being entirely useless, are hauled down; and the main-sail is drawn up in the brails, that the fore-sail may operate; a measure which considerably facilitates the steering, or effort of the helm. As the wind is then intercepted by the main-top-sail and main-top-gallant-sail, in its passage to the fore-top-sail and fore-top-gallant-sail, these latter are by consequence entirely becalmed; and might

Sail.

Sailing
||
Saint.

might therefore be furl'd, to prevent their being fretted by flapping against the mast, but that their effort contributes greatly to prevent the ship from broaching-to, when she deviates from her course to the right or left thereof.

Thus all the different methods of sailing may be divided into four, viz. close-hauled, large, quartering, and afore the wind; all which relate to the direction of the wind with regard to the ship's course, and the arrangement of the sails.

SAILING also implies a particular mode of navigation, formed on the principles, and regulated by the laws, of trigonometry. Hence we say, Plain Sailing, Mercator's, Middle-latitude, Parallel, and Great-circle Sailing. See the article NAVIGATION.

SAIL-MAKING, the art of making sails. See SAIL and SHIP-BUILDING.

SAILOR, the same with MARINER and SEAMAN.

SAINT, means a person eminent for piety and virtue, and is generally applied by us to the apostles and other holy persons mentioned in Scripture. But the Romanists make its application much more extensive. Under the word CANONIZATION we have already said something on their practice of creating saints. Our readers, however, will not, we trust, be displeased with the following more enlarged account, which they themselves give of the matter. The canonization of saints, then, they tell us, is the enrolment of any person in the *canon* or catalogue of those who are called *saints*; or, it is a judgment and sentence of the church, by which it is declared, that a deceased person was eminent for sanctity during his lifetime, and especially towards the end of it; and that consequently he must now be in glory with God, and deserves to be honoured by the church on earth with that veneration which she is wont to pay to the blessed in heaven.

The discipline with regard to this matter has varied. It would seem that in the first ages every bishop in his own diocese was wont to declare what persons were to be honoured as saints by his people. Hence St Cyprian, about the middle of the third century, B. 3. ep. 6. requires that he be informed of those who should die in prison for the faith, that so he might make mention of them in the holy sacrifice with the martyrs, and might honour them afterwards on the anniversary day of their happy death. This veneration continued sometimes to be confined to one country; but sometimes it extended to distant provinces, and even became universal all over the church. It was thus that St Lawrence, St Ambrose, St Augustine, St Basil, and many others, appear to have been canonized by custom and universal persuasion. In those ages none were reckoned saints but the apostles, the martyrs, and very eminent confessors, whose sanctity was notorious everywhere.

Afterwards it appears that canonizations were wont to be performed in provincial synods under the direction of the metropolitan. It was thus that St Isidore of Seville was canonized in the 7th century, by the 8th council of Toledo, 14 years after his death. This manner of canonization continued occasionally down to the 12th century. The last instance of a saint canonized in that way, is that of St Walter abbot of Pontoise, who was declared a saint by the archbishop of Rouen in the year 1153.

Saint.

In the 12th century, in order to prevent mistakes in so delicate a matter, Pope Alexander III. judged it proper to reserve this declaration to the holy see of Rome exclusively; and decreed that no one should for the future be honoured by the church as a saint without the express approbation of the pope.

Since that time, the canonization of saints has been carried on in the form of a process; and there is at Rome a congregation of cardinals, called the *congregation of holy rites*, who are assisted by several divines under the name of *consultors*, who examine such matters, and prepare them for the decision of his holiness. When therefore any potentate, province, city, or religious body, think fit, they apply to the pope for the canonization of any person.

The first juridical step in this business must be taken by the bishop in whose diocese the person for whom the application is made had lived and died, who by his own authority calls witnesses to attest the opinion of the holiness, the virtues, and miracles, of the person in question. When the deceased has resided in different dioceses, it may be necessary that different bishops take such depositions; the originals of which are preserved in the archives of their respective churches, and authentic copies sealed up are sent to Rome by a special messenger, where they are deposited with the congregation of rites, and where they must remain for the space of ten years without being opened. They are then opened, and maturely examined by the congregation, and with their advice the pope allows the cause to go on or not as he thinks proper. The solicitors for the canonization are then referred by his holiness to the said congregation, which, with his authority, gives a commission to one or more bishops, or other respectable persons, to examine, on the spot and in the places where the person in question has lived and died, into his character and whole behaviour. These commissioners summon witnesses, take depositions, and collect letters and other writings of the venerable man, and get all the intelligence they can concerning him, and the opinion generally entertained of him. The report of these commissioners is considered attentively and at length by the congregation, and every part of it discussed by the consultors, when the congregation determines whether or not they can permit the process to go on. If it be allowed to proceed, a cardinal, who is called *promoter*, undertakes to be the principal agent in that affair. The first question then that comes to be examined is, whether or not the person proposed for canonization can be proved to have been in an eminent degree endued with the moral virtues of prudence, justice, fortitude, and temperance; and with the theological virtues of faith, hope, and charity? All this is canvassed with great deliberation; and there is a distinguished ecclesiastic called the *promoter of the holy faith*, who is sworn to make all reasonable objections to the proofs that are adduced in favour of the canonization. If the decision be favourable, then the proofs of miracles done to show the sanctity of the person in question are permitted to be brought forward; when two miracles must be verified to the satisfaction of the congregation, both as to the reality of the facts, and as to their having been truly above the power of nature. If the decision on this comes out likewise favourable, then the whole is laid



Scarabæus Carnifex.



*Scarabæus Hercules
or Rhinoceros Beetle.*



Sailing.

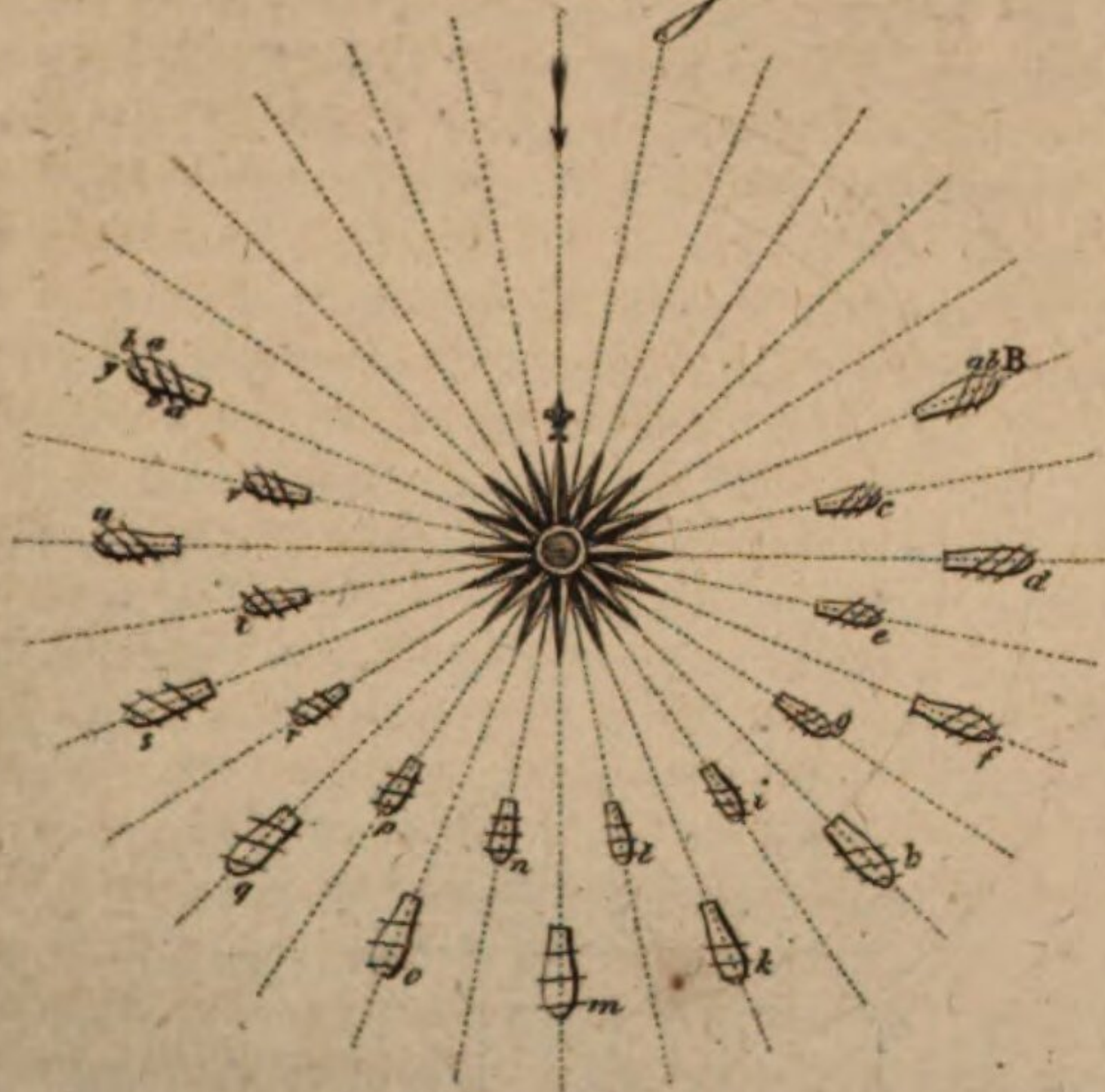


Fig. 2.

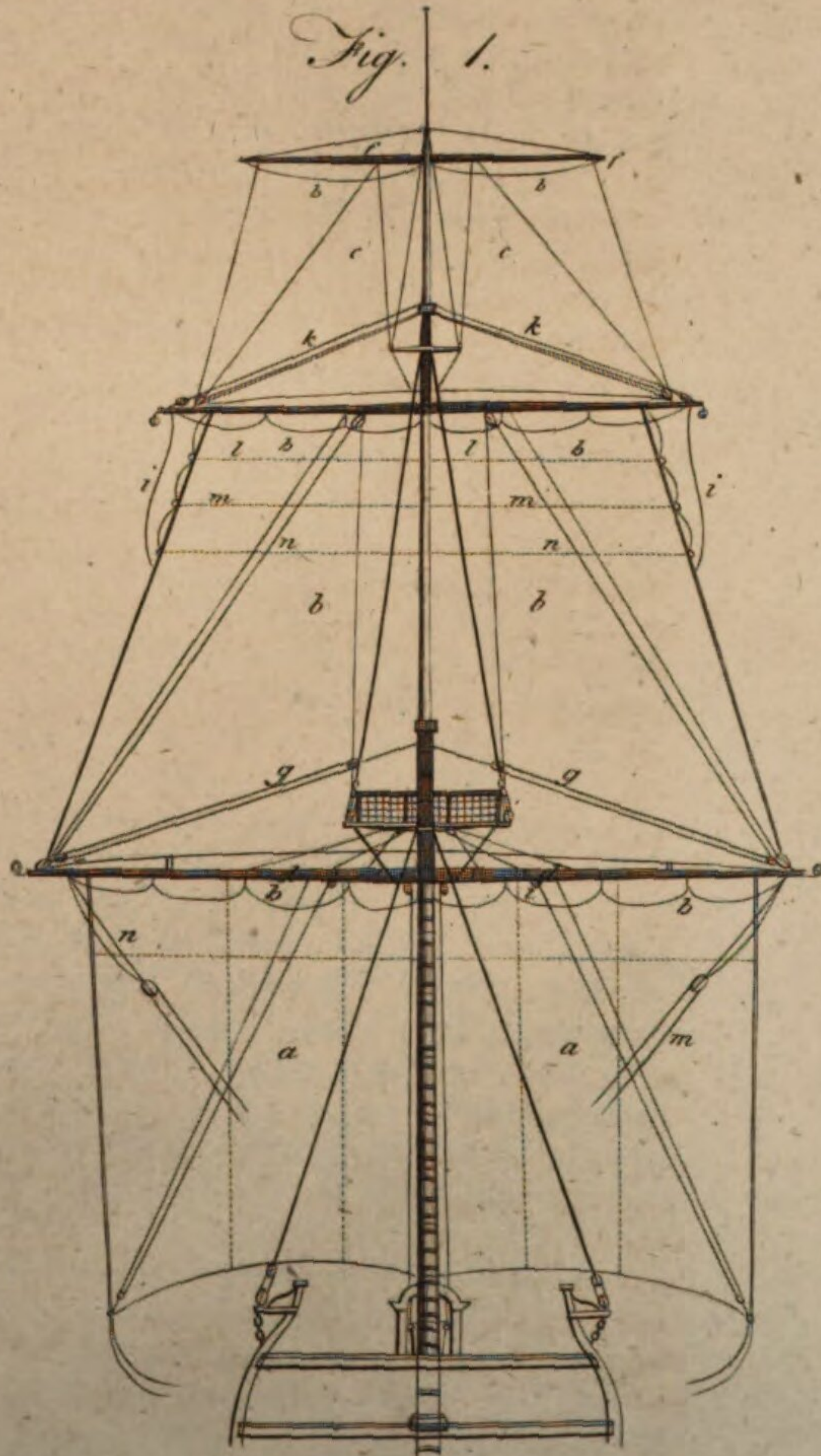


Sapindus Saponaria.



Sail.

Fig. 1.



Saint.

before the pope and what divines he chooses (A). Public prayer and fasting are likewise prescribed, in order to obtain light and direction from heaven. After all this long procedure, when the pope is resolved to give his approbation, he issues a bull, first of *beatification*, by which the person is declared *blest*, and afterwards another of *sanctification*, by which the name of *saint* is given him. These bulls are published in St Peter's church with very great solemnity.

A person remarkable for holiness of life, even before he is canonized, may be venerated as such by those who are persuaded of his eminent virtue, and his prayers may be implored; but all this must rest on private opinion. After his canonization, his name is inserted in the Martyrology, or catalogue of saints, of which the respective portion is read every day in the choir at the divine office. A day is also appointed for an yearly commemoration of him. His name may be mentioned in the public church service, and his intercession with God besought. His relics may be enshrined: he may be painted with rays of glory, and altars and churches may be dedicated to God in honour of him, and in thanksgiving to the divine goodness for the blessings bestowed on him in life, and for the glory to which he is raised in heaven.

The affair of a canonization is necessarily very expensive, because so many persons must be employed about it; so many journeys must be made; so many writings for and against it must be drawn out. The expence altogether amounts to about 25,000 Roman crowns, or L. 6000 Sterling. But it is generally contrived to canonize two or three at a time, by which means the particular expence of each is very much lessened, the solemnity being common.

It often happens that the solicitors for a canonization are unsuccessful. Thus the Jesuits, even when their interest at Rome was greatest, could not obtain the canonization of Bellarmine; and it is remarkable, that the objection is said to have been, his having defended the indirect power of the pope over Christian princes even in temporals.

Several authors have written on canonization, and particularly Prosper Lambertini, afterwards pope under the name of Benedict XIV. who had held the office of *promoter of the faith* for many years. He published on it a large work in several volumes, in folio, of which there is an abridgment in French. In this learned performance there is a full history of the canonization of saints in general, and of all the particular processes of that kind that are on record: an account is given of the manner of proceeding in these extraordinary trials; and it is shown, that, besides the assistance of providence, which is implored and expected in what is so much connected with religion, all prudent human means are made use of, in order to avoid mistakes, and to obtain all the evidence of which the matter is susceptible, and which must appear more than sufficient to every impartial judge. See POPE, POPERY, &c.

SAINT-Foin, in botany, a species of the hedyсарum. See HEDYSARUM; and AGRICULTURE, n° 180.

SAINT Januarius's Blood. See CHEMISTRY, n° 800.

SAINTES, an ancient and considerable town of France. It is the capital of Saintonge, and before the revolution was a bishop's see. It contained likewise several convents, a Jesuits college, and an abbey remarkable for its steeple, built with small stones, which admits the light. It is seated on an eminence, 37 miles south-east of Rochelle, and 262 south south-west of Paris. W. Long. o. 34. N. Lat. 45. 45. The castle is seated on a rock, and is reckoned impregnable.

This city was a Roman colony; and those conquerors of the earth, who polished the nations they subdued, have left behind them the traces of their magnificence. In a hollow valley between two mountains, and almost adjoining to one of the suburbs, are the ruins of the amphitheatre. Though now in the last stage of decay, its appearance is august and venerable. In some parts, scarce any of the arches are to be seen; but the east end is still in a great degree of preservation. From its situation in a valley, and from the ruins of an aqueduct which conveyed water to the town from near three leagues distance, it has been supposed that Naumachia were represented in it; but this amounts only to conjecture. A triumphal arch, on which is an inscription in Roman letters, merits likewise attention. It was erected to Germanicus, on the news of his death, so universally lamented throughout the empire. The river Charente surrounds this city, as the Severne does that of Shrewsbury, describing the form of a horse-shoe.

Except the remains of Roman grandeur yet visible at Saintes, the place contains very little to detain or amuse a traveller. It is built with great irregularity; the streets are narrow and winding, the houses mean, and almost all of them are some centuries old. The cathedral has been repeatedly defaced and destroyed by Normans and Huguenots, who made war alike on every monument of art or piety. One tower only escaped their rage, which is said to have been built as early as the year 800 by Charlemagne. It is of an enormous magnitude, both as to height and circumference. These circumstances have probably conducted more to its preservation during the fury of war, than any veneration for the memory of its founder, or for the sanctity of its institution.

SAINTONGE, a province of France, bounded on the east by Angoumois and Perigord, on the north by Poitou and the territory of Aunis, on the west by the ocean, and on the south by Bourdelois and Giron, about 62 miles in length and 30 in breadth. The river Charente runs through the middle of it, and renders it one of the finest and most fertile provinces in France, abounding in all sorts of corn and fruits; and they make the best salt here in Europe.

THE SAINTS, three leagues distant from Guadeloupe, are two very small islands, which, with another yet smaller, form a triangle, and have a tolerable harbour. Thirty Frenchmen were sent thither in 1648, but were soon driven away by an excessive drought, which dried up their only spring before they had time to make any reservoirs. A second attempt was made in 1652, and

Saint
u
Saints.

A) His holiness generally appoints three consistories; in the first of which the cardinals only assist, and give their opinion; in the second, a preacher pronounces a speech in praise of the candidate before a numerous audience; to the third, not only the cardinals, but all the bishops who are at Rome, are invited, and all of them give their vote by word of mouth.

Sakrada-
wendra
||
Salamanca.

and lasting plantations were established, which now yield 50,000 weight of coffee, and 100,000 of cotton.

SAKRADAWENDRA is the name of one of the Ceylonese deities, who commands and governs all the rest, and formerly answered the prayers of his worshippers; but according to the fabulous account which is given of him, the golden chair, on which he sat, and the foot of which was made of wax, that was softened by their prayers and tears, and sunk downward, so that he could take notice of their requests and relieve them, being disposed of among the poor, they no longer derive any benefit from him, or pay him any reverence. See **BUDUN**.

SAL. See **SALT**.

SAL Alembroth. See **CHEMISTRY**, n° 1047.

Native SAL Ammoniac. This salt, according to Mongou, is met with in the form of an efflorescence on the surface of the earth, or adhering in powder to rocks. Sometimes, as in Persia and the country of the Kalmucks, it is found as hard as stone. It is met with of different colours, as grey, black, green, and red, in the neighbourhood of volcanoes, in the caverns or grottoes of Puzzuoli, and in the mineral lakes of Tuscany, as well as in some mountains of Tartary and Thibet. At Solfaterra, near Naples, it is found in the crevices, of a yellowish colour, like common sal-ammoniac more than once sublimed. For common sal-ammoniac, see **CHEMISTRY-Index** at *Ammoniac* and *Ammoniacal Salt*.

SAL, Fixed. See **CHEMISTRY** n° 1016.

SAL, Glauber's secret. See **CHEMISTRY-Index** at *Glauber*.

SAL Nitrous. See **CHEMISTRY**, n° 292, &c.

SAL Vegetable. See **CHEMISTRY-Index** at *Salts*, &c.

SAL Volatile. See **CHEMISTRY-Index** at *Volatile*.

SAL Digestivus, Sylvi. See **CHEMISTRY**, n° 379, 421, 794.

SAL Diureticus. See **CHEMISTRY**, n° 868.

SAL Microscopicus. See **CHEMISTRY**, n° 606. and 905.

SAL Prunella. See **CHEMISTRY**, n° 744.

SAL Sedativus. See **CHEMISTRY-Index** at *Borax*.

SAL Volatile Oleosum. See **CHEMISTRY**, n° 1036.

SALADIN, a famous sultan of Egypt, equally renowned as a warrior and legislator. He supported himself by his valour, and the influence of his amiable character, against the united efforts of the chief Christian potentates of Europe, who carried on the most unjust wars against him, under the false appellation of *Holy Wars*. See the articles **EGYPT** and **CROISADE**.

SALAMANCA, an ancient, large, rich, and populous city of Spain, in the kingdom of Leon, situated on the river Tormes, about 75 miles west from Madrid. It is said to have been founded by Teucer the son of Telamon, who called it *Salamis* or *Salmantica*, in memory of the ancient Salamis. Here is an university, the greatest in Spain, and perhaps inferior to none in the whole world, in respect at least to its revenues, buildings, number of scholars, and masters. Here are also many grand and magnificent palaces, squares, convents, churches, colleges, chapels, and hospitals. The bishop of this country is suffragan to the archbishop of Compostella, and has a yearly revenue of 1000 ducats. A Roman way leads from hence to Merida and Seville, and there is an old Roman bridge over the river. Of

the colleges in the university, four are appropriated to young men of quality; and near it is an infirmary for poor sick scholars. W. Long. 6. 10. N. Lat. 41. 0.

SALAMANDER, in zoology. See **LACERTA**.

SALAMIS, an island of the Archipelago, situated in E. Long. 34. 0. N. Lat. 37. 32.—It was famous in antiquity for a battle between the Greek and Persian fleets. In the council of war held among the Persians on this occasion, all the commanders were for engaging, because they knew this advice to be most agreeable to the king's inclinations. Queen Artemisia was the only person who opposed this resolution. She was queen of Halicarnassus; and followed Xerxes in this war with five ships, the best equipped of any in the fleet, except those of the Sidonians. This princess distinguished herself on all occasions by her singular courage, and still more by her prudence and conduct. She represented, in the council of war we are speaking of, the dangerous consequences of engaging a people that were far more expert in maritime affairs than the Persians; alleging, that the loss of a battle at sea would be attended with the ruin of their army; whereas, by spinning out the war, and advancing into the heart of Greece, they would create jealousies and divisions among their enemies, who would separate from one another, in order to defend each of them their own country; and that the king might, almost without striking a blow, make himself master of Greece. This advice, though very prudent, was not followed, but an engagement unanimously resolved upon. Xerxes, in order to encourage his men by his presence, caused a throne to be erected on the top of an eminence, whence he might safely behold whatever happened; having several scribes about him, to write down the names of such as should signalize themselves against the enemy. The approach of the Persian fleet, with the news that a strong detachment from the army was marching against Cleombrotus, who defended the isthmus, struck such a terror into the Peloponnesians, that they could not by any intreaties be prevailed upon to stay any longer at Salamis. Being therefore determined to put to sea, and sail to the isthmus, Themistocles privately dispatched a trusty friend to the Persian commanders, informing them of the intended flight; and exhorting them to send part of their fleet round the island, in order to prevent their escape. The same messenger assured Xerxes, that Themistocles, who had sent him that advice, designed to join the Persians, as soon as the battle began, with all the Athenian ships. The king giving credit to all he said, immediately caused a strong squadron to sail round the island in the night in order to cut off the enemy's flight. Early next morning, as the Peloponnesians were preparing to set sail, they found themselves encompassed on all sides by the Persian fleet; and were against their will obliged to remain in the straits of Salamis and expose themselves to the same dangers with their allies. The Grecian fleet consisted of 380 sail, that of the Persians of 2000 and upwards. Themistocles avoided the engagement till a certain wind, which rose regularly every day at the same time, and which was entirely contrary to the enemy, began to blow. As soon as he found himself favoured by this wind, he gave the signal for battle. The Persians, knowing that they fought under their king's eye, advanced with great resolution; but the wind blowing directly in their faces, and the largeness and

Salamander,
Salamis.

Salamis,
Salary.

number of their ships embarrassing them in a place so strait and narrow, their courage soon abated; which the Greeks observing, used such efforts, that in a short time breaking into the Persian fleet, they entirely disordered them; some flying towards Phalarus, where their army lay encamped; others saving themselves in the harbours of the neighbouring islands. The Ionians were the first that betook themselves to flight. But Queen Artemisia distinguished herself above all the rest, her ships being the last that fled: which Xerxes observing, cried out that the men behaved like women, and the women with the courage and intrepidity of men. The Athenians were so incensed against her, that they offered a reward of 10,000 drachmas to any one that should take her alive: but she, in spite of all their efforts, got clear of the ships that pursued her, and arrived safe on the coast of Asia. In this engagement, which was one of the most memorable actions we find recorded in history, the Grecians lost 40 ships; and the Persians 200, besides a great many more that were taken, with all the men and ammunition they carried.

The island of Salamis is of a very irregular shape; it was reckoned 70 or 80 stadia, *i. e.* 8 or 10 miles long, reaching westward as far as the mountains called *Kerata* or *The Horns*. Pausanias informs us, that on one side of this island stood in his time a temple of Diana, and on the other a trophy for a victory obtained by Themistocles, together with the temple of Cychreus, the site of which is now thought to be occupied by the church of St Nicholas.

The city of Salamis was demolished by the Athenians, because in the war with Cassander it surrendered to the Macedonians, from disaffection. In the second century, when it was visited by Pausanias, some ruins of the Agora or market-place remained, with a temple and image of Ajax; and not far from the port was shown a stone, on which, they related, Telamon sat to view the Salaminian ships on their departure to join the Grecian fleet at Aulis. The walls may still be traced, and it has been conjectured were about four miles in circumference. The level space within them was now covered with green corn. The port is choked with mud, and was partly dry. Among the scattered marbles are some with inscriptions. One is of great antiquity, before the introduction of the Ionic alphabet. On another, near the port, the name of Solon occurs. This renowned lawgiver was a native of Salamis, and a statue of him was erected in the market-place, with one hand covered by his vest, the modest attitude in which he was accustomed to address the people of Athens. An inscription on black marble was also copied in 1676 near the ruin of a temple, probably that of Ajax. The island of Salamis is now inhabited by a few Albanians, who till the ground. Their village is called *Ampelaki*, "the Vineyard," and is at a distance from the port, standing more inland. In the church are marble fragments and some inscriptions.

SALARY, a recompense or consideration made to a person for his pains and industry in another man's business. The word is used in the statute 23 Edw. III. cap. 1. *Salarium* at first signified the rents or profits of a sale, hall, or house (and in Gascoigne they now call the seats of the gentry *sala's*, as we do *halls*); but afterwards it was taken for any wages, stipend, or annual allowance.

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SALACIA, in botany; a genus of the trigynia order, belonging to the gynandria class of plants. The calyx is quinquefid; the corolla quinquepetalous; the antheræ sitting on the top of the germ.

SALE, is the exchange of a commodity for money; barter, or permutation, is the exchange of one commodity for another. When the bargain is concluded, an obligation is contracted by the buyer to pay the value, and by the seller to deliver the commodity, at the time and place agreed on, or immediately, if no time be specified.

In this, as well as other mercantile contracts, the safety of commerce requires the utmost good faith and veracity. Therefore, although, by the laws of England, a sale, above the value of 10 l. be not binding, unless earnest be paid, or the bargain confirmed by writing, a merchant would lose all credit who refused to perform his agreement, although these legal requisites were omitted.

When a specific thing is sold, the property, even before delivery, is in some respect vested in the buyer; and if the thing perishes, the buyer must bear the loss. For example, if a horse dies before delivery, he must pay the value: but if the bargain only determines the quantity and quality of the goods, without specifying the identical articles, and the seller's warehouse, with all his goods, be burned, he is intitled to no payment. He must also bear the loss if the thing perish through his fault; or when a particular time and place of delivery is agreed on, if it perish before it be tendered, in terms of the bargain.

If a person purchase goods at a shop without agreeing for the price, he is liable for the ordinary market-price at the time of purchase.

If the buyer proves insolvent before delivery, the seller is not bound to deliver the goods without payment or security.

If the importation, or use of the commodities sold, be prohibited by law, or if the buyer knows that they were smuggled, no action lies for delivery.

The property of goods is generally presumed, in favour of commerce, to belong to the possessor, and cannot be challenged in the hands of an onerous purchaser. But to this there are some exceptions. By the Scots law, stolen goods may in all cases be reclaimed by the proprietor, and also by the English law, unless they were bought *bona fide* in open market; that is, in the accustomed public places, on stated days in the country, or in a shop in London; and horses may be reclaimed, unless the sale be regularly entered by the book-keeper of the market. In all cases, if the goods be evicted by the lawful proprietor, the seller is liable to the purchaser for the value.

Actions for payment of shop-accounts, as well as other debts not constituted by writing, are limited in England to six years. The testimony of one witness is admitted; and the seller's books, although the person that kept them be dead, are good evidence for one year. In Scotland, merchants books may be proved within three years of the date of the last article, by one witness, and the creditor's books and oath in supplement. After three years, they can only be proved by the oath or writ of the debtor. A merchant's books are in all cases good evidence against him.

SALEP, in the materia medica, the dried root of a species of orchis. See **ORCHIS**.

4 H

Several

Salacia
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Salap.

Salep.

Several methods of preparing salep have been proposed and practised. Geoffroy has delivered a very judicious process for this purpose in the *Histoire de l'Académie Royale des Sciences*, 1740; and Retmus, in the Swedish *Transactions* 1764, has improved Geoffroy's method. But Mr Moulton of Rochdale has lately favoured the public with a new manner of curing the orchis root; by which salep is prepared, at least equal, if not superior, to any brought from the Levant. The new root is to be washed in water; and the fine brown skin which covers it is to be separated by means of a small brush, or by dipping the root in hot water, and rubbing it with a coarse linen cloth. When a sufficient number of roots have been thus cleaned, they are to be spread on a tin-plate, and placed in an oven heated to the usual degree, where they are to remain six or ten minutes, in which time they will have lost their milky whiteness, and acquired a transparency like horn, without any diminution of bulk. Being arrived at this state, they are to be removed, in order to dry and harden in the air, which will require several days to effect; or by using a very gentle heat, they may be finished in a few hours.

Salep thus prepared, may be afforded in those parts of England where labour bears a high value, at about eight-pence or ten-pence per pound: And it might be sold still cheaper, if the orchis were to be cured, without separating from it the brown skin which covers it; a troublesome part of the process, and which does not contribute to render the root either more palatable or salutary. Whereas the foreign salep is now sold at five or six shillings per pound.

Salep is said to contain the greatest quantity of vegetable nourishment in the smallest bulk. Hence a very judicious writer, to prevent the dreadful calamity of famine at sea, has lately proposed that the powder of it should constitute part of the provisions of every ship's company. This powder and portable soup, dissolved in boiling water, form a rich thick jelly, capable of supporting life for a considerable length of time. An ounce of each of these articles, with two quarts of boiling water, will be sufficient subsistence for a man a day; and as being a mixture of animal and vegetable food, must prove more nourishing than double the quantity of rice-cake, made by boiling rice in water: which last, however, sailors are often obliged solely to subsist upon for several months; especially in voyages to Guinea, when the bread and flour are exhausted, and the beef and pork, having been salted in hot countries, are become unfit for use.

* *Essays
Medical and
Experimental*
1754.

"But as a wholesome nourishment (says Dr Percival *), rice is much inferior to salep. I digested several alimentary mixtures prepared of mutton and water, beat up with bread, sea-biscuit, salep, rice-flower, sago-powder, potato, old cheese, &c. in a heat equal to that of the human body. In 48 hours they had all acquired a vinous smell, and were in brisk fermentation, except the mixture with rice, which did not emit many air-bubbles, and was but little changed. The third day several of the mixtures were sweet, and continued to ferment; others had lost their intestine motion, and were sour; but the one which contained the rice was become putrid. From this experiment it appears, that rice as an aliment is slow of fermentation, and a very weak corrector of putrefaction. It is therefore an im-

proper diet for hospital-patients; but more particularly for sailors in long voyages; because it is incapable of preventing, and will not contribute much to check, the progress of that fatal disease, the sea-scurvy. Under certain circumstances, rice seems disposed of itself, without mixture, to become putrid; for by long keeping it sometimes acquires an offensive fœtor. Nor can it be considered as a very nutritive kind of food, on account of its difficult solubility in the stomach. Experience confirms the truth of this conclusion; for it is observed by the planters in the West Indies, that the negroes grow thin, and are less able to work, whilst they subsist upon rice.

"Salep has the singular property of concealing the taste of salt water; a circumstance of the highest importance at sea, when there is a scarcity of fresh water. I dissolved a dram and a half of common salt in a pint of the mucilage of salep, so liquid as to be potable, and the same quantity in a pint of spring-water. The salep was by no means disagreeable to the taste, but the water was rendered extremely unpalatable. This experiment suggested to me the trial of the orchis root as a corrector of acidity, a property which would render it a very useful diet for children. But the solution of it, when mixed with vinegar, seemed only to dilute like an equal proportion of water, and not to cover its sharpness. Salep, however, appears by my experiments to retard the acetous fermentation of milk; and consequently would be a good lithing for milk-pottage, especially in large towns, where the cattle being fed upon four draff must yield acedent milk.

"Salep in a certain proportion, which I have not yet been able to ascertain, would be a very useful and profitable addition to bread. I directed one ounce of the powder to be dissolved in a quart of water, and the mucilage to be mixed with a sufficient quantity of flour, salt, and yeast. The flour amounted to two pounds, the yeast to two ounces, and the salt to 80 grains. The loaf when baked was remarkably well fermented, and weighed three pounds two ounces. Another loaf, made with the same quantity of flour, &c. weighed two pounds and 12 ounces; from which it appears that the salep, though used in so small a proportion, increased the gravity of the loaf six ounces, by absorbing and retaining more water than the flour alone was capable of. Half a pound of flour and an ounce of salep were mixed together, and the water added according to the usual method of preparing bread. The loaf when baked weighed 13 ounces and an half; and would probably have been heavier if the salep had been previously dissolved in about a pint of water. But it should be remarked, that the quantity of flour used in this trial was not sufficient to conceal the peculiar taste of the salep.

"The restorative, mucilaginous, and demulcent qualities of the orchis root, render it of considerable use in various diseases. In the sea-scurvy it powerfully obtunds the acrimony of the fluids, and at the same time is easily assimilated into a mild and nutritious chyle. In diarrhoeas and the dysentery it is highly serviceable, by sheathing the internal coat of the intestines, by abating irritation, and gently correcting putrefaction. In the symptomatic fever, which arises from the absorption of pus from ulcers in the lungs, from wounds, or from amputation, salep used plentifully is an admirable demul-

Salerno
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Salicornia.

cent, and well adapted to resist the dissolution of the crasis of the blood, which is so evident in these cases. And by the same mucilaginous quality, it is equally efficacious in the strangury and dysury; especially in the latter, when arising from a venereal cause, because the discharge of urine is then attended with the most exquisite pain, from the ulceration about the neck of the bladder and through the course of the urethra. I have found it also an useful aliment for patients who labour under the stone or gravel." The ancient chemists appear to have entertained a very high opinion of the orchis root, as appears from the *secreta secretorum* of Raymund Lully, a work dated 1565.

SALERNO, an ancient and considerable town of Italy, in the kingdom of Naples, and capital of the Hither Principato, with an archbishop's see, a castle, harbour, and an university chiefly for medicine. It is seated at the bottom of a bay of the same name. E. Long. 14. 43. N. Lat. 40. 45.

SALET, in war, a light covering or armour for the head, anciently worn by the light-horse, only different from the casque in that it had no crest and was little more than a bare cap.

SALIENT, in fortification, denotes projecting. There are two kinds of angles, the one salient, which have their point outwards; the other re-entering, which have their points inwards.

SALIENT, SALIENT, or SAILLANT, in heraldry, is applied to a lion, or other beast, when its fore-legs are raised in a leaping posture.

SALIC, or SALIQUE, LAW, (*Lex Salica*), an ancient and fundamental law of the kingdom of France, usually supposed to have been made by Pharamond, or at least by Clovis; in virtue whereof males only are to inherit.

Some, as Pottellus, would have it to have been called *Salic*, q. d. *Gallie*, because peculiar to the Gauls. Fer Montanus insists, it was because Pharamond was at first called *Salicus*. Others will have it to be so named, as having been made for the salic lands. These were noble fiefs which their first kings used to bestow on the salians, that is, the great lords of their salle or court, without any other tenure than military service; and for this reason, such fiefs were not to descend to women, as being by nature unfit for such a tenure. Some, again, derive the origin of this word from the Salians, a tribe of Franks that settled in Gaul in the reign of Julian, who is said to have given them lands on condition of their personal service in war. He even passed the conditions into a law, which the new conquerors acquiesced in, and called it *salic*, from the name of their former countrymen.

SALICORNIA, JOINTED GLASS-WORT, or *Saltwort*: A genus of the monogynia order, belonging to the monandria class of plants; and in the natural method ranking under the 12th order, *Holoracea*. The calyx is ventricose, or a little swelling out and entire; there are no petals, and but one seed. There are four species, of which the most remarkable are, 1. The fruticosa, with obtuse points, grows plentifully in most of the salt marshes which are overflowed by the tides in many parts of England. It is an annual plant, with thick, succulent, jointed stalks, which trail upon the ground. The flowers are produced at the ends of the joints toward the extremity of the branches, which are small, and scarce discernible by the naked eye. 2. The

perennis, with a shrubby branching stalk, grows naturally in Sheppey island. This hath a shrubby branching stalk about six inches long; the points of the articulations are acute; the stalks branch from the bottom, and form a kind of pyramid. They are perennial, and produce their flowers in the same manner as the former.

The inhabitants near the sea-coasts where these plants grow, cut them up toward the latter end of summer, when they are fully grown; and, after having dried them in the sun, they burn them for their ashes, which are used in making of glass and soap. These herbs are by the country people called *kelp*, and promiscuously gathered for use. See the article SALSOLA; also *Dyeing of LEATHER*, p. 750, note A.

SALII, in Roman antiquity, priests of Mars, where of there were 12, instituted by Numa, wearing painted, particoloured garments, and high bonnets; with a steel cuirasse on the breast. They were called *salii*, from *saltare* "to dance;" because, after assisting at sacrifices, they went dancing about the streets, with bucklers in their left-hand, and a rod in their right, striking musically with their rods on one another's bucklers, and singing hymns in honour of the gods.

SALINO, one of the Lipari islands, situated between Sicily and Italy, consists of two mountains both in an high state of cultivation. The one lying more towards the north than the other is rather the highest of the two, and is called *del Capo*, "the head." The other is called *della Fossa felice*, or "the happy valley." One third of the extent of these hills from the bottom to the summit is one continued orchard, consisting of vines, olive, fig, plum, apricot, and a vast diversity of other trees. The white roofs of the houses, which are everywhere interspersed amid this diversity of verdure and foliage, contribute to variegate the prospect in a very agreeable manner. The back part of almost all the houses is shaded by an arbour of vines, supported by pillars of brick, with cross poles to sustain the branches and foliage of the vines. Those arbours shelter the houses from the rays of the sun, the heat of which is quite scorching in these southern regions. The vines are extremely fruitful; the poles bending under the weight of the grapes.

The scenes in this island are more interesting to the lover of natural history than to the antiquarian. See RETICULUM.

On the south side of the island, however, there are still to be seen some fine ruins of an ancient bath, a Roman work. They consist of a wall 10 or 11 fathoms in extent, and terminating in an arch of no great height, of which only a small part now remains. The building seems to have been reduced to its present state rather by the ravages of men than the injuries of time. Almost all the houses in the island are built of materials which have belonged to ancient monuments. The ancients had, in all probability, baths of fresh as well as of salt water in this island; for whenever the present inhabitants have occasion for a spring of fresh water, they have only to dig a pit on the shore, and pure sweet water flows in great abundance.

There were formerly mines of alum here, from which the inhabitants drew a very considerable yearly revenue. But whether they are exhausted, or whatever circumstance may have caused them to be given up, they are

Salii,
Salino.

Salisbury. now no longer known. The island abounds in a variety of fruits.

On the east-side it is very populous. There are two places which are both called *Lingua*, "the tongue," and which contain a good number of inhabitants; the one is near Salino, the other is distinguished by the name of *St Marina*: there are besides these two other villages. All these places together may contain about 4000 inhabitants: the circumference of the island may be about 14 miles.

SALISBURY, the capital of the county of Wiltshire in England, situated in W. Long. 1. 55. N. Lat. 51. 3. This city owed its first rise to its cathedral, which was begun in 1219, and finished in 1258. According to an estimate delivered in to Henry III. it cost forty thousand merks. It is a Gothic building, and is certainly the most elegant and regular in the kingdom. The doors and chapels are equal in number to the months, the windows to the days, and the pillars and pilasters to the hours in a year. It is built in the form of a lantern, with a spire in the middle, and nothing but buttresses and glass windows on the outside. The spire is the highest in the kingdom, being 410 feet, which is twice the height of the monument in London. The pillars and pilasters in the church are of fusile marble; the art of making which is now either entirely lost or little known. This magnificent church has lately undergone most beautiful alterations; with an addition of two fine windows, and an organ presented by the king. The roof of the chapter-house, which is 50 feet in diameter and 150 in circumference, bears all upon one slender pillar, which is such a curiosity as can hardly be matched in Europe. The turning of the western road through the city in the reign of Edward III. was a great advantage to it. The chancellorship of the most noble order of the garter, which is annexed to this see, was first conferred on bishop Richard Beauchamp. The hospital of St Michael's, near this city, was founded by one of its bishops. Dr Seth Ward, bishop of this see in the reign of Charles II. contributed greatly to the making the river Avon navigable to Christ-church in Hampshire. The same prelate, in 1683, built an hospital for the entertainment of the widows of poor clergymen. There are three other churches besides the cathedral, which is without the liberty of the city, and a greater number of boarding schools, especially for young ladies, than in any other town in England. Here is a manufacture of druggets, flannels, bonelace, and those cloths called *Salisbury whites*; in consideration of which, and its fairs, markets, assises, boarding-schools, and clergy, the city may be justly said to be in a flourishing condition. It was incorporated by Henry III. and is governed by a mayor, high-steward, recorder, deputy-recorder, 24 aldermen, and 30 assistants or common-council men. The number of souls is about 10,000. A new council chamber is just now (June 1794) building here with proper courts of justice, by the earl of Radnor; to which Mr Hussey is also a great benefactor. That quarter called the *close*, where the canons and prebendaries live, is like a fine city of itself. Here is an assembly for the ladies every Tuesday, and coaches set out from hence to London every day. In this town are several charity-schools; the expence of one of them

is entirely defrayed by the bishop. The city gives title of earl to the noble family of Cecil.

SALISBURY Plain, the extensive downs in Wiltshire, which are thus denominated, form in summer one of the most delightful parts of Great Britain for extent and beauty. It extends 28 miles west of Weymouth, and 25 east to Winchester; and in some places is near 40 miles in breadth. That part about Salisbury is a chalky down, and is famous for feeding numerous flocks of sheep. Considerable portions of this tract are now enclosing, the advantages of which are so great, that we hope the whole will undergo so beneficial an alteration.

SALIVA, is that fluid by which the mouth and tongue are continually moistened in their natural state; and is supplied by glands which form it, that are called *salivary glands*. This humour is thin and pellucid, incapable of being concreted by the fire, almost without taste and smell. By chewing, it is expressed from the glands which separate it from the blood, and is intimately mixed with our food, the digestion of which it greatly promotes. In hungry persons it is acrid, and copiously discharged; and in those who have fasted long it is highly acrid, penetrating, and resolvent. A too copious evacuation of it produces thirst, loss of appetite, bad digestion, and an atrophy.

SALIVATION, in medicine, a promoting of the flux of saliva, by means of medicines, mostly by mercury. The chief use of salivation is in diseases belonging to the glands and membrana adiposa, and principally in the cure of the venereal disease; though it is sometimes also used in epidemic diseases, cutaneous diseases, &c. whose crises tend that way.

SALIX, the **WILLOW**, in botany: A genus of the diandria order, belonging to the dicæcia class of plants; and in the natural method ranking under the 50th order, *Amentacea*. The amentum of the male is scaly; there is no corolla; but a nectariferous glandule at the base of the flower. The female amentum is scaly; there is no corolla; the style bifid; the capsule unilocular and bivalved; the seeds pappous. The willow trees have been frequently the theme of poetical description, both in ancient and modern times. In Virgil, Horace, and in Ovid, we have many exquisite allusions to them and their several properties; and for a melancholy lover or a contemplative poet, imagination cannot paint a fitter retreat than the banks of a beautiful river, and the shade of a drooping willow. There are 31 species; of which the most remarkable are, 1. The caprea, or common fallow-tree, grows to but a moderate height, having smooth, dark-green, brittle branches; oval, waved, rough leaves, indented at top, and woolly underneath. It grows abundantly in this country, but more frequently in dry than moist situations: it is of a brittle nature, so is unfit for the basket-makers; but will serve for poles, stakes, and to lop for fire-wood; and its timber is good for many purposes. 2. The alba, white, or silver-leaved willow, grows to a great height and considerable bulk, having smooth pale-green shoots; long, spear-shaped, acuminate, sawed, silvery-white leaves, being downy on both sides, with glands below the ferratures. This is the common white willow, which grows abundantly about towns and villages, and by the sides of rivers and brooks, &c. 3. The vitellina, yellow or golden willow, grows

Saliva
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Saliz.

Salix.
Sallee.

grows but to a moderate height; having yellow, very pliant, shoots; oval, acute, serrated, very smooth leaves, with the serratures cartilaginous, and with callous punctures on the footstalks. 4. The *purpurea*, purple, or red willow, grows to a large height, having long, reddish, very pliant shoots, and long spear-shaped, serrated, smooth leaves, the lower ones being opposite. 5. The *viminalis*, or osier-willow, grows but a moderate height, having slender rod-like branches; very long, pliant, greenish shoots; and very long, narrow, spear-shaped, acute, almost entire leaves, hoary, and silky underneath. 6. The *pentandria*, pentandrous, broad-leaved, sweet-scented willow, grows to some considerable stature, having brownish-green branches; oblong, broad, serrated, smooth, sweet-scented leaves, shining above; and pentandrous flowers. 7. The *triandria*, or triandrous willow, grows to a large stature, having numerous, erect, greyish-green branches, and pliant shoots; oblong, acute-pointed, serrated smooth, shining-green leaves, eared at the base; and triandrous flowers. 8. The *fragilis*, fragile or crack-willow, rises to a middling stature, with brownish, very fragile, or brittle branches, long, oval-lanceolate, sawed, smooth leaves of a shining-green on both sides, having dentated glandular foot-stalks. This sort in particular being exceedingly fragile, so that it easily cracks and breaks, is unfit for culture in osier-grounds. 9. The *Babylonica*, Babylonian pendulous salix, commonly called *weeping willow*, grows to a largish size, having numerous, long, slender, pendulous branches, hanging down loosely all round in a curious manner, and long, narrow, spear-shaped, serrated, smooth leaves. This curious willow is a native of the east, and is retained in our hardy plantations for ornament, and exhibits a most agreeable variety; particularly when disposed singly by the verges of any piece of water, or in spacious openings of grass-ground.

All the species of *salix* are of the tree kind, very hardy, remarkably fast growers, and several of them attaining a considerable stature when permitted to run up to standards. They are mostly of the aquatic tribe, being generally the most abundant and of most prosperous growth in watery situations: they however will grow freely almost anywhere, in any common soil and exposure; but grow considerably the fastest and strongest in low moist land, particularly in marshy situations, by the verges of rivers, brooks, and other waters; likewise along the sides of watery ditches, &c. which places often lying waste, may be employed to good advantage, in plantations of willows, for different purposes.

SALLEE, an ancient and considerable town of Africa in the kingdom of Fez, with a harbour and several ports. The harbour of Sallee is one of the best in the country; and yet, on account of a bar that lies across it, ships of the smallest draught are forced to unload and take out their guns before they can get into it. There are docks to build ships; but they are hardly ever used, for want of skill and materials. It is a large place, divided into the Old and New Towns, by the river Guero. It has long been famous for its rovers or pirates, which make prizes of all Christian ships that come in their way, except there is a treaty to the contrary. The town of Sallee in its present state, though large, presents nothing worthy the observation of the

traveller except a battery of 24 pieces of cannon fronting the sea, and a redoubt at the entrance of the river, which is about a quarter of a mile broad, and penetrates several miles into the interior country. W. Long, 6. 30. N. Lat. 34. 0.

SALLET, or SALLAD, a dish of eatable herbs, ordinarily accompanying roast meat; composed chiefly of crude, fresh herbage, seasoned with salt, oil, and vinegar.

Menage derives the word from the Latin *salata*; of *sal*, "salt;" others from *salcedo*; Du-Cange from *salgama*, which is used in Ausonius and Columella in the same sense.

Some add mustard, hard eggs, and sugar; others, pepper, and other spices, with orange-peel, saffron, &c.

The principal sallet-herbs, and those which ordinarily make the basis of our English sallets, are lettuce, celeri, endive, cresses, radish, and rape; along with which, by way of furniture, or additional, are used purslane, spinach, sorrel, tarragon, burnet, corn-sallet, and chervil.

The gardeners call some plants *small herbs* in sallets; these should always be cut while in the seed-leaf: as cresses, mustard, radish, turnep, spinach, and lettuce; all which are raised from seeds sown in drills, or lines, from the middle of February to the end of March, under glasses or frames; and thence to the middle of May, upon natural beds, warmly exposed; and during the summer heats in more shady places; and afterwards in September, as in March, &c.; and lastly, in the rigour of the winter, in hot-beds. If they chance to be frozen in very frosty weather, putting them in spring-water two hours before they be used recovers them.

SALLO (Denis de), a French writer, famous for being the projector of literary journals, was born at Paris in 1626. He studied the law, and was admitted a counsellor in the parliament of Paris in 1652. It was in 1664 he schemed the plan of the *Journal des Sçavans*; and the year following began to publish it under the name of Sieur de Heronville, which was that of his valet de chambre. But he played the critic so severely, that authors, surpris'd at the novelty of such attacks, retorted so powerfully, that M. de Sallo, unable to weather the storm, after he had published his third Journal, declined the undertaking, and turned it over to the abbé Gallois; who, without presuming to criticise, contented himself merely with giving titles, and making extracts. Such was the origin of literary journals, which afterwards sprang up in other countries under different titles; and the success of them, under judicious management, is a clear proof of their utility. M. de Sallo died in 1669.

SALLUSTIUS (Caius Crispus), a celebrated Roman historian, was born at Amiternum, a city of Italy, in the year of Rome 669, and before Christ 85. His education was liberal, and he made the best use of it. His Roman History in six books, from the death of Sylla to the conspiracy of Catiline, the great work from which he chiefly derived his glory among the antients, is unfortunately lost excepting a few fragments; but his two detached pieces of History which happily remain entire, are sufficient to justify the great encomiums he has received as a writer.—He has had the singular honour to be twice translated by a royal hand: first by our Elizabeth, according to Camden; and

Sallet
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Sallustius.

^{Sallustius} and secondly, by the present Infant of Spain, whose ^{Salmasius.} version of this elegant historian, lately printed in folio, is one of the most beautiful books that any country has produced since the invention of printing. No man has inveighed more sharply against the vices of his age than this historian; yet no man had less pretensions to virtue than he. His youth was spent in a most lewd and profligate manner; and his patrimony almost squandered away when he had scarcely taken possession of it. Marcus Varro, a writer of undoubted credit, relates, in a fragment preserved by Aulus Gellius, that Sallust was actually caught in bed with Fausta the daughter of Sylla, by Milo her husband; who scourged him very severely, and did not suffer him to depart till he had redeemed his liberty with a considerable sum. A. U. C. 694, he was made questor, and in 702 tribune of the people; in neither of which places is he allowed to have acquitted himself at all to his honour. By virtue of his questorship, he obtained an admission into the senate; but was expelled thence by the censors in 704, on account of his immoral and debauched way of life. In the year 705 Cæsar restored him to the dignity of a senator; and to introduce him into the house with a better grace, made him questor a second time. In the administration of this office he behaved himself very scandalously; exposed every thing to sale that he could find a purchaser for; and if we may believe the author of the invective, thought nothing wrong which he had a mind to do: *Nihil non venale habuerit, ejus aliquis emptor fuit, nihil non æquum et verum duxit, quod ipsi facere collibisset.* In the year 707, when the African war was at an end, he was made prætor for his services to Cæsar, and sent to Numidia. Here he acted the same part as Verres had done in Sicily; outrageously plundered the province; and returned with such immense riches to Rome, that he purchased a most magnificent building upon mount Quirinal, with those gardens which to this day retain the name of *Sallustian gardens*, besides his country house at Tivoli. How he spent the remaining part of his life, we have no account from ancient writers. Eusebius tells us, that he married Terentia, the divorced wife of Cicero; and that he died at the age of 50, in the year 710, which was about four years before the battle of Actium. Of the many things which he wrote, beside his Histories of the Catilinarian and Jugurthine wars, we have some orations or speeches, printed with his fragments.

SALLY-PORTS, in fortification, or *Postern-Gates*, as they are sometimes called, are those under-ground passages which lead from the inner works to the outward ones; such as from the higher flank to the lower, or to the tenailles, or the communication from the middle of the curtain to the ravelin. When they are made for men to go through only, they are made with steps at the entrance and going out. They are about 6 feet wide and 8½ feet high. There is also a gutter or shore made under the sally-ports, which are in the middle of the curtains, for the water which runs down the streets to pass into the ditch; but this can only be done when they are wet ditches. When sally-ports serve to carry guns through them for the out-works, instead of making them with steps, they must have a gradual slope, and be 8 feet wide.

SALMASIUS (Claudius), a French writer of un-

common abilities and immense erudition, descended from an ancient and noble family, and born at or near Semur in 1596. His mother, who was a Protestant, infused her notions of religion into him, and he at length converted his father: he settled at Leyden; and in 1650 paid a visit to Christina queen of Sweden, who is reported to have shown him extraordinary marks of regard. Upon the violent death of Charles I. of England, he was prevailed on by the royal family, then in exile, to write a defence of that king; which was answered by our famous Milton in 1651, in a work intitled *Defensio pro Populo Anglicano contra Claudii Salmasii Defensionem Regiam*. This book was read over all Europe; and conveyed such a proof of the writer's abilities, that he was respected even by those who hated his principles. Salmasius died in 1653; and some did not scruple to say, that Milton killed him by the acuteness of his reply. His works are numerous, and of various kinds; but the greatest monuments of his learning are, his *Notæ in Historiæ Augustæ Scriptores*, and his *Exercitationes Plinianæ in Solinum*.

SALMO, the SALMON; a genus of the order of abdominales. The head is smooth, and furnished with teeth and a tongue; the rays of the gills are from four to ten; the back-fin is fat behind; and the belly-fins have many rays. There are 29 species; of which the most remarkable are,

1. The salar, or common salmon, is a northern fish, being unknown in the Mediterranean sea and other warm climates: it is found in France in some of the rivers that empty themselves into the ocean, and north as far as Greenland; they are also very common in Newfoundland, and the northern parts of North America. Salmon are taken in the rivers of Kamtschatka; but whether they are of the same species with the European kind, is not very certain. They are in several countries a great article of commerce, being cured different ways, by salting, pickling, and drying: there are stationary fisheries in Iceland, Norway, and the Baltic; but we believe nowhere greater than those at Colraine in Ireland; and in Great Britain at Berwick, and in some of the rivers of Scotland. In the History of Cumberland, we are told that "they deposit their spawn even on the upper side of Pooley-bridge, but always in the stream of Eamont. At those times it is not an easy matter to drive them away by throwing stones at them. They will take a bait of roe, or small fish, while upon the rudd, or laying their spawn. We have never heard of a salmon or salmon smelt being seen in the lake. They go up the river Derwent in September, through the lake of Bassenthwaite, up the river which runs through Keswick into the vale of St John, where they deposit their spawn in the small streams and feeders of the lake. The young salmon are called *salmon smelts*, and go down to the sea with the first floods in May."

The salmon was known to the Romans, but not to the Greeks. Pliny speaks of it as a fish found in the rivers of Aquitaine: Ausonius enumerates it among those of the Mosel. The salmon is a fish that lives both in the salt and fresh waters; quitting the sea at certain seasons for the sake of depositing its spawn, in security, in the gravelly beds of rivers remote from their mouths. There are scarce any difficulties but what they will overcome, in order to arrive at places fit for their

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their purpose: they will ascend rivers hundreds of miles, force themselves against the most rapid streams, and spring with amazing agility over cataracts of several feet in height. Salmon are frequently taken in the Rhine as high up as Basil; they gain the sources of the Lapland rivers in spite of their torrent-like currents, and surpass the perpendicular falls of Leixlip, Kennerth, and Pont Aberglaflyn. It may here be proper to contradict the vulgar error, of their taking their tail in their mouth when they attempt to leap; such as Mr Pennant saw, sprung up quite straight, and with a strong tremulous motion.

The salmon is a fish so generally known, that a very brief description will serve. The largest we ever heard of weighed 74 pounds. The colour of the back and sides are grey, sometimes spotted with black, sometimes plain: the covers of the gills are subject to the same variety; the belly silvery; the nose sharp-pointed; the end of the under jaw in the males often turns up in the form of a hook; sometimes this curvature is very considerable: it is said that they lose this hook when they return to the sea. The teeth are lodged in the jaws and on the tongue, and are slender, but very sharp; the tail is a little forked.

2. The trutta, or sea-trout, migrates like the true salmon up several of our rivers; spawns, and returns to the sea. That described by Mr Pennant was taken in the Tweed below Berwick, June 1769. The shape was more thick than the common trout; the weight three pounds two ounces. The irides silver; the head thick, smooth, and dusky, with a gloss of blue and green; the back of the same colour, which grows fainter towards the side-line. The back is plain, but the sides, as far as the lateral line, are marked with large distinct irregularly-shaped spots of black: the lateral line straight; the sides beneath the line, and the belly, are white. Tail broad, and even at the end. The dorsal fin had 12 rays; the pectoral 14; the ventral 9; the anal 10. The flesh when boiled is of a pale red, but well-flavoured.

3. The fario, or trout; the colours of which vary greatly in different waters, and in different seasons. Trouts differ also in size. One taken in Llynallet, Denbighshire, which is famous for an excellent kind, measured 17 inches, its depth three and three quarters, its weight one pound ten ounces; the head thick; the nose rather sharp; the upper jaw a little longer than the lower; both jaws, as well as the head, were of a pale brown, blotched with black; the teeth sharp and strong, disposed in the jaws, roof of the mouth, and tongue. The back was dusky; the sides tinged with a purplish bloom, marked with deep purple spots, mixed with black above and below the side-line, which was straight; the belly white. The first dorsal fin was spotted; the spurious fin brown, tipped with red; the pectoral, ventral, and anal fins, of a pale brown; the edges of the anal fin white; the tail very little forked when extended.—The stomachs of the common trouts are uncommonly thick and muscular. They feed on the shell-fish of lakes and rivers, as well as on small fish. They likewise take into their stomachs gravel or small stones, to assist in comminuting the testaceous parts of their food. The trouts of certain lakes in Ireland, such as those of the province of Galway and some others, are re-

markable for the great thickness of their stomachs, which, from some slight resemblance to the organs of digestion in birds, have been called *gizzards*; the Irish name the species that has them *gillaroo trouts*. These stomachs are sometimes served up to table under the former appellation. Trouts are most voracious fish, and afford excellent diversion to the angler. The passion for the sport of angling is so great in the neighbourhood of London, that the liberty of fishing in some of the streams in the adjacent counties is purchased at the rate of 10 l. *per annum*. These fish shift their quarters to spawn; and, like salmon, make up towards the heads of rivers to deposit their roes. The under jaw of the trout is subject, at certain times, to the same curvature as that of the salmon.

“It is caught (say the editors of the History of Cumberland) in very great plenty at all seasons of the year; one weighing a pound and a half is an usual size, though some are caught of 4 lb. weight. Five or six ounces is a common weight; the largest are commonly the best for the table, when they cut of a deep salmon colour. In the winter months great quantities are potted along with the charre, and sent to London, &c.—The angler, on a favourable day, here enjoys his diversion in higher perfection than in most places. A trout occasionally strays out of the Eamont into the lake, and *vice versa*, out of the lake into the river. They are easily distinguished by their spots; and it is observed, that a fish taken from its usual place is not in so good a condition as one of equal length taken on its own ground; hence it is probable, that they do not emigrate, except when diseased or spawning. Geld fish (those without spawn) are the firmest and best. They have been taken out of a solid piece of ice, in which they were frozen, as it were in a case, perfectly uninjured, after an imprisonment of several hours.”

4. The species, called from its colour the *white*, migrates out of the sea into the river Esk in Cumberland, from July to September. When dressed, their flesh is red, and most delicious eating. They have, on their first appearance from the salt water, the *lerna salmonae*, or salmon louse, adhering to them. They have both milt and spawn; but no fry has as yet been observed. This is the fish called by the Scots *phinnoc*. They never exceed a foot in length. The upper jaw is a little longer than the lower; in the first are two rows of teeth, in the last one: on the tongue are six teeth. The back is straight: the whole body of an elegant form: the lateral line is straight; colour, between that and the top of the back, dusky and silvery intermixed; beneath the line, of an exquisite whiteness; first dorsal fin spotted with black: tail black, and much forked.

5. The samlet is the least of the trout kind; is frequent in the Wye, in the upper part of the Severn, and the rivers that run into it, in the north of England, and in Wales. It is by several imagined to be the fry of the salmon; but Mr Pennant dissents from that opinion. See his *Brit. Zool.* III. 303.

This species has a general resemblance to the trout, therefore must be described comparatively. *1st*, The head is proportionably narrower, and the mouth less than that of the trout. *2^{dly}*, Their body is deeper. *3^{dly}*, They seldom exceed six or seven inches in length; at most, eight and a half. *4^{thly}*, The pectoral fins have generally

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generally but one large black spot, though sometimes a single small one attends it; whereas the pectoral fins of the trout are more numerously marked. 5thly, The spurious or fat fin on the back is never tipped with red; nor is the edge of the anal fin white. 6thly, The spots on the body are fewer, and not so bright: it is also marked from the back to the sides with six or seven large bluish bars; but this is not a certain character, as the same is sometimes found in young trouts. 7thly, The tail of the samlet is much more forked than that of the trout. These fish are very frequent in the rivers of Scotland, where they are called *pars*. They are also common in the Wye, where they are known by the name of *skirlings*, or *lasprings*.

6. The alpinus, or red charr (*umbla minor*, or case charr of Pennant), is an inhabitant of the lakes of the north, and of those of the mountainous parts of Europe. It affects clear and pure waters, and is very rarely known to wander into running streams, except into such whose bottom is similar to the neighbouring lake. It is found in vast abundance in the cold lakes on the summits of the Lapland Alps, and is almost the only fish that is met with in any plenty in those regions; where it would be wonderful how they subsisted, had not Providence supplied them with innumerable larvæ of the gnat kind: these are food to the fish, who in their turn are a support to the migratory Laplanders, in their summer-voyages to the distant lake. In such excursions those vacant people find a luxurious and ready repast in these fish, which they dress and eat without the addition of sauces; for exercise and temperance render useless the inventions of epicurism. There are but few lakes in our island that produce this fish; and even those not in any abundance. It is found in Ullswater and Windermere in Westmoreland; in Llyn Quellyn, near the foot of Snowdon; and, before the discovery of the copper-mines, in those of Llynberris; but the mineral streams have entirely destroyed the fish in the last lakes. In Scotland it is found in Loch Inch, and other neighbouring lakes, and is said to go into the Spey to spawn.

"The largest and most beautiful we ever received (says Mr Pennant) were taken in Windermere, and were communicated by the Rev. Mr Farish of Carlisle, with an account of their natural history. He sent five specimens; two under the name of the *case charr*, male and female; another he called the *geld charr*, i. e. a charr which had not spawned the preceding season, and on that account is reckoned to be in the greatest perfection. The two others were inscribed, the *red charr*, the *silver* or *gild charr*, the *carpia lacus benaci*, RAI Syn. Pisc. 66. which last are in Westmoreland distinguished by the epithet *red*, by reason of the flesh assuming a higher colour than the other when dressed.

"The *umbla minor*, or case charr, spawns about Michaelmas, and chiefly in the river Brathay, which uniting with another called the *Rowthay*, about a quarter of a mile above the lake, they both fall into it together. The Brathay has a black rocky bottom; the bottom of the Rowthay is a bright sand, and into this the charr are never observed to enter. Some of them, however, spawn in the lake; but always in such parts of it which are stony, and resemble the channel of the Brathay. They are supposed to be in the highest per-

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fection about May, and continue so all the summer; yet are rarely caught after April. When they are spawning in the river they will take a bait, but at no other time; being commonly taken, as well as the other species, in what they call *breast-nests*, which are in length about 24 fathoms, and about five where broadest.—The season which the other species spawn in is from the beginning of January to the end of March. They are never known to ascend the rivers, but always in those parts of the lake which are springy, where the bottom is smooth and sandy, and the water warmest. The fishermen judge of this warmth, by observing that the water seldom freezes in the places where they spawn, except in intense frosts, and then the ice is thinner than in other parts of the lake. They are taken in greatest plenty from the end of September to the end of November; at other times they are hardly to be met with. This species is much more esteemed for the table than the other, and is very delicate when potted. The length of the red charr to the division in its tail was 12 inches; its biggest circumference almost 7. The first dorsal fin was five inches and three quarters from the tip of its nose, and consisted of 12 branched rays, the first of which was short, the fifth the longest; the fat fin was very small. Each of the five fish had double nostrils, and small teeth in the jaws, roof of the mouth, and on the tongue.—The jaws of the case-charr are perfectly even; on the contrary, those of the red-charr were unequal, the upper jaw being the broadest, and the teeth hung over the lower, as might be perceived on passing the finger over them.—The geld or barren charr was rather more slender than the others, as being without spawn. The back was of a glossy dusky blue; the sides silvery, mixed with blue, spotted with pale red; the sides of the belly were of a pale red, the bottom white. The tails of each bifurcated."

7. The thymallus, or grayling, haunts clear and rapid streams, and particularly those that flow through mountainous countries. It is found in the rivers of Derbyshire; in some of those of the north; in the Tame near Ludlow; in the Lug, and other streams near Leominster; and in the river near Christchurch, Hampshire. It is also very common in Lapland: the inhabitants make use of the guts of this fish instead of rennet, to make the cheese which they get from the milk of the rein-deer. It is a voracious fish, rises freely to the fly, and will very eagerly take a bait. It is a very swift swimmer, and disappears like the transient passage of a shadow, from whence we believe it derived the name of *umbra*.

Effugiensque oculos celeri leviss umbra natatu. Auson.
The *umbra* swift escapes the quickest eye.

Thymalus and *thymus* are names bestowed on it on account of the imaginary scent, compared by some to that of thyme; but we never could perceive any particular smell. It is a fish of an elegant form; less deep than that of a trout: the largest we ever heard of was taken near Ludlow, which was about half a yard long, and weighed four pounds six ounces; but this was a very rare instance. The irides are silvery, tinged with yellow: the teeth very minute, seated in the jaws and the roof of the mouth, but none on the tongue: the head is dusky; the covers of the gills of a glossy green: the back and sides of a fine silvery grey; but when the fish is just taken,

Salmon. taken, varied slightly with blue and gold: the side-line is straight: the scales are large, and the lower edges dusky, forming straight rows from head to tail: the tail is much forked.

8. The eperlanus, or smelt, inhabits the seas of the northern parts of Europe, and probably never is found as far south as the Mediterranean: the Seine is one of the French rivers which receive it; but whether it is found south of that, we have not at present authority to say. If we can depend on the observations of navigators, who generally have too much to think of to attend to the minutiae of natural history, these fish are taken in the Straits of Magellan, and of a most surprising size, some measuring 20 inches in length and 8 in circumference. They inhabit the seas that wash these islands the whole year, and never go very remote from shore except when they ascend the rivers. It is remarked in certain rivers, that they appear a long time before they spawn, being taken in great abundance in November, December, and January, in the Thames and Dee, but in others not till February; and in March and April they spawn; after which they all return to the salt water, and are not seen in the rivers till the next season. It has been observed that they never come into the Mersey as long as there is any snow-water in the river. These fish vary greatly in size; but the largest we ever heard of was 13 inches long, and weighed half a pound. They have a very particular scent, from whence is derived one of their English names, *smelt*, i. e. smell it. That of *sparling*, which is used in Wales and the north of England, is taken from the French *sperlan*. There is a wonderful disagreement in the opinion of people in respect to the scent of this fish: some assert it flavours of the violet; the Germans, for a very different reason, distinguish it by the elegant title of *Stinckfisch*. — Smelts are often sold in the streets of London split and dried. They are called *dried sparlings*; and are recommended as a relish to a glass of wine in the morning. It is a fish of a very beautiful form and colour; the head is transparent, and the skin in general so thin, that with a good microscope the blood may be observed to circulate. The irides are silvery; the pupil of a full black; the under jaw is the longest: in the front of the upper jaw are four large teeth; those in the sides of both are small; in the roof of the mouth are two rows of teeth; on the tongue two others of large teeth. The scales are small, and readily drop off: the tail consists of 19 rays, and is forked. The colour of the back is whitish, with a cast of green, beneath which it is varied with blue, and then succeeds a beautiful gloss of a silvery hue.

9. The lavaretus, or gwiniad, is an inhabitant of several of the lakes of the Alpine parts of Europe. It is found in those of Switzerland, Savoy, and Italy; of Norway, Sweden, Lapland, and Scotland; in those of Ireland, and of Cumberland; and in Wales, in that of Llyntegid, near Bala, in Merionethshire. It is the same with the ferra of the lake of Geneva; the schelly of Hulse-water; the pollen of Lough Neagh; and the vangis and juvengis of Loch Mabon. In Scotland there is a tradition that it was first introduced there by their beautiful but unfortunate queen, Mary Stuart; and as in her time the Scotch court was much Frenchified, it seems likely that the name was derived from the French

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vendoise, a “dace;” to which a slight observer might be tempted to compare it from the whiteness of its scales. The British name *gwiniad*, or *whiting*, was bestowed upon it for the same reason. It is a gregarious fish, and approaches the shores in vast shoals in spring and in summer; which proves in many places a blessed relief to the poor of inland countries, in the same degree as the annual return of the herring is to those who inhabit the coasts. Between 7000 and 8000 have been taken at one draught. The gwiniad is a fish of an insipid taste, and must be eaten soon, for it will not keep long; those that choose to preserve them do it with salt. They die very soon after they are taken. Their spawning season in Llyntegid is in December. The largest gwiniad we ever heard of weighed between three and four pounds: the head is small, smooth, and of a dusky hue: the eyes very large; the pupil of a deep blue: the nose blunt at the end; the jaws of equal length: the mouth small and toothless: the branchiostegous rays nine: the covers of the gills silvery, powdered with black. The back is a little arched, and slightly carinated: the colour, as far as the lateral line, is glossed with deep blue and purple; but towards the lines assumes a silvery cast, tinged with gold; beneath which those colours entirely prevail. The tail is very much forked: the scales are large, and adhere close to the body.

SALMON, in ichthyology. See SALMO, n° 1.

SALMON-Fishery. See Salmon-FISHERY.

SALON, or SALOON, in architecture, a lofty, spacious sort of hall, vaulted at top, and usually comprehending two stories, with two ranges of windows.

The salon is a grand room in the middle of a building, or at the head of a gallery, &c. Its faces, or sides, are all to have a symmetry with each other; and as it usually takes up the height of two stories, its ceiling, Daviler observes, should be with a moderate sweep.

The salon is a state-room much used in the palaces in Italy; and from thence the mode came to us. Ambassadors, and other great visitors, are usually received in the salon.

It is sometimes built square, sometimes round or oval, sometimes octagonal, as at Marly, and sometimes in other forms.

SALONA, a sea-port town of Dalmatia, seated on a bay of the gulph of Venice. It was formerly a very considerable place, and its ruins show that it was 10 miles in circumference. It is 18 miles north of Spalatto, and subject to Venice. It is now a wretched village, preserving few distinguishable remains of its ancient splendor. Doubtless the two last ages have destroyed all that had escaped the barbarity of the northern nations that demolished it. In a valuable MS. relation of Dalmatia, written by the senator Giambattista Guistiniani, about the middle of the 16th century, there is a hint of what existed at that time. “The nobility, grandeur, and magnificence of the city of Salona, may be imagined from the vaults and arches of the wonderful theatre, which are seen at this day; from the vast stones of the finest marble, which lies scattered on, and buried in the fields; from the beautiful column of three pieces of marble, which is still standing in the place where they say the arsenal was, towards the sea-shore; and from the many arches of surprising beauty,

Salmon
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Salona.

Fortis's
Travels into
Dalmatia.

Salonichi
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Salfette.

supported by very high marble columns; the height of the arches is a stone-throw, and above them there was an aqueduct, which reached from Salona to Spalatro. There are to be seen many ruins and vestiges of large palaces, and many ancient epitaphs may be read on fine marble stones; but the earth, which is increased, has buried the most ancient stones, and the most valuable things." E. Long. 17. 29. N. Lat. 44. 10.

SALONICHI, formerly called *Thessalonica*, a seaport town of Turkey in Europe, and capital of Macedonia, with an archbishop's see. It is ancient, large, populous, and rich, being about 10 miles in circumference. It is a place of great trade, carried on principally by the Greek Christians and Jews, the former of which have 30 churches, and the latter as many synagogues; the Turks also have a few mosques. It is surrounded with walls, flanked with towers, and defended on the land-side by a citadel, and near the harbour with three forts. It was taken from the Venetians by the Turks in 1431. The principal merchandize is silk. It is seated at the bottom of a gulph of the same name, partly on the top, and partly on the side of a hill, near the river Vardar. E. Long. 23. 13. N. Lat. 40. 41.

SALSES, a very strong castle of France, in Roussillon, on the confines of Languedoc. It was taken from the Spaniards by the French in 1642; and is seated on a lake of the same name, among mountains, 10 miles north of Perignan. E. Long. 3. 0. N. Lat. 43. 35.

SALSETTE, an island of the East Indies, adjacent to Bombay, from which it is in one place divided only by a narrow pass fordable at low water. It is about 26 miles long, and eight or nine broad. The soil is rich, and by proper cultivation capable of producing any thing that will grow in tropical climates. It is everywhere well watered, and when in the possession of the Portuguese furnished such quantities of rice, that it was called the *Granary of Goa*. It abounds also in all kinds of provisions, and has great plenty of game, both of the four-footed and feathered kind. It has pretty high mountains; and there is a tradition that the whole was thrown up from the bottom of the sea: in confirmation of which it is said, that on the top of the highest hill there was found, some years ago, a stone anchor, such as was anciently used by the inhabitants of that country. Here we meet with the ruins of a place called *Canara*, where there are excavations of rocks, supposed to be contemporary with those of ELEPHANTA. They are much more numerous, but not comparable to the former either in bigness or workmanship.

The island of Salfette lately formed part of the Portuguese dominions in India. It ought to have been ceded to the English along with Bombay, as part of the dower of Catharine of Lisbon, espoused to Charles II. The fulfilment of this article, however, being evaded, the island remained in possession of the Portuguese; and notwithstanding the little care they took of it, the revenue of it was valued at 60,000 l. Such was the negligence of the Portuguese government, that they took no care to fortify it against the attacks of the Marattas, from whose dominions Salfette was only separated by a very narrow pass fordable at low water. Here they had only a miserable redoubt of no consequence, till, on the appearance of an approaching

war with the Marattas, they began to build another, which indeed would have answered the purpose of protecting the island, provided the Marattas had allowed them to finish it. This, however, was not their intention. They allowed them indeed to go quietly on with their works, till they saw them almost completed, when they came and took possession of them. The Marattas thus became dangerous neighbours to the English at Bombay, until it was ceded to the latter by the treaty concluded with these people in 1780. E. Long. 72. 15. N. Lat. 19. 0.

SALSOLA, GLASS-WORT: A genus of the digynia order, belonging to the pentandria class of plants; and in the natural method ranking under the 12th order, *Holoraceae*. The calyx is pentaphyllous; there is no corolla; the capsule is monospermous, with a screwed seed.

The species are, 1. The kali, which grows naturally in the salt marshes in divers parts of England. It is an annual plant, which rises above five or six inches high, sending out many side branches, which spread on every side, garnished with short awl-shaped leaves; which are fleshy, and terminate in acute spines. The flowers are produced from the side of the branches, to which they sit close, and are encompassed by short prickly leaves; they are small, and of an herbaceous colour. The seeds are wrapped up in the empalement of the flower, and ripen in autumn; soon after which the plant decays. 2. The tragus grows naturally on the sandy shores of the south of France, Spain, and Italy. This is also an annual plant, which sends out many diffused stalks, garnished with linear leaves an inch long, ending with sharp spines. The flowers come out from the side of the stalks in the same manner as those of the former; their empalements are blunt, and not so closely encompassed with leaves as those of the other. 3. The soda, rises with herbaceous stalks near three feet high, spreading wide. The leaves on the principal stalk, and those on the lower part of the branches, are long, slender, and have no spines; those on the upper part of the stalk and branches are slender, short, and crooked. At the base of the leaves are produced the flowers, which are small, and hardly perceptible; the empalement of the flower afterwards encompasses the capsule, which contains one cochleated seed. 4. The vermiculata grows naturally in Spain. This hath shrubby perennial stalks, which rise three or four feet high, sending out many side-branches, garnished with fleshy, oval, acute-pointed leaves, coming out in clusters from the side of the branches; they are hoary, and have stiff prickles. The flowers are produced from between the leaves toward the ends of the branches; they are so small as scarce to be discerned, unless they are closely viewed. The seeds are like those of the other kinds. 5. The rosacea grows naturally in Tartary. This is an annual plant, whose stalks are herbaceous, and seldom rise more than five or six inches high. The leaves are awl-shaped, ending in acute points; the empalements of the flowers spread open: the flowers are small, and of a rose colour, but soon fade: the seeds are like those of the other sorts.

All the sorts of glass-wort are sometimes promiscuously used for making the sal kali, but it is the third sort which is esteemed best for this purpose. The manner of making it is as follows: Having dug a trench near

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near the sea, they place laths across it, on which they lay the herb in heaps, and, having made a fire below, the liquor, which runs out of the herbs, drops to the bottom, which at length thickening, becomes *sal kali*, which is partly of a black, and partly of an ash-colour, very sharp and corrosive, and of a saltish taste. This, when thoroughly hardened, becomes like a stone; and in that state is transported to different countries for making of glass.

SALT, one of the great divisions of natural bodies, but which has never yet been accurately defined. The characteristic marks of salt have usually been reckoned its power of affecting the organs of taste, and being soluble in water. But this will not distinguish salt from quicklime, which also affects the sense of taste, and dissolves in water; yet quicklime has been universally reckoned an earth, and not a salt. The only distinguishing property of salts, therefore, is their crystallization in water: however, this does not belong to all salts; for the nitrous and marine acids, though allowed on all hands to be salts, are yet incapable of crystallization, at least by any method hitherto known. Several of the imperfect neutral salts also, such as combinations of the nitrous, muriatic, and vegetable acids, with some kinds of earths, crystallize with very great difficulty. However, by the addition of spirit of wine, or some other substances which absorb part of the water, keeping the liquor in a warm place, &c. all of them may be reduced to crystals of one kind or other. Salt, therefore, may be defined a substance affecting the organs of taste, soluble in water, and capable of crystallization, either by itself or in conjunction with some other body; and, universally, every salt capable of being reduced into a solid form, is also capable of crystallization *per se*. Thus the class of saline bodies will be sufficiently distinguished from all others: for quicklime, though soluble in water, cannot be crystallized without addition either of fixed air or some other acid; yet it is most commonly found in a solid state. The precious stones, basaltes, &c. though supposed to be formed by crystallization, are nevertheless distinguished from salts by their insipidity and insolubility in water.

But acids and alkalis, and combinations of both, when in a concrete form, are salts, and of the purest sort. Hence we conclude, that the bodies, to which the name of *salts* more properly belongs, are the concretions of those substances; which are accordingly called *acid salts*, *alkaline salts*, and *neutral salts*. These last are combinations of acid and alkaline salts, in such proportion as to render the compounds neither sour nor alkaline to the taste. This proportionate combination is called *saturation*: thus the common kitchen-salt is a neutral salt, composed of marine acid and mineral alkali combined together to the point of saturation. The appellation of *neutral salts* is also extended to denote all those combinations of acids, and any other substance with which they can unite, so as to lose, wholly or in great measure, their acid properties.

But altho' this general definition of salts is commonly received, yet there are many writers, especially mineralogists, who confine the denomination of *salts* in the manner we first mentioned, viz. to those substances only which, besides the general properties of salts, have the power of crystallizing, that is, of arranging their particles so as to form regularly-shaped bodies, called *crystals*, when the water superfluous to their concrete existence has been evaporated.

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The ancient chemists asserted that salt was one of the component principles of metals, and indeed of every thing else: a doctrine which was attempted to be revived by the late Dr Price of Guildford, who thought it probable that the basis of all imperfect metals is saline, because Mr Scheele had lately extracted a real acid from arsenic, which, by the addition of a proper quantity of phlogiston, becomes a femimetal. But here the argument will hold only with regard to the femimetals, all of which are volatile in the fire, and therefore may possibly have a volatile basis, such as all acids are in some degree: but some of the imperfect metals, as tin and copper, may be reduced to a calx equally refractory with quicklime itself; and even zinc, though volatile in close vessels, is yet capable of being reduced to an exceedingly refractory calx called *flowers of zinc*; and it is to be observed, that the regulus of arsenic, even in its most perfect metalline form, cannot be calcined like other metals. The common opinion that metals have an earthy, rather than a saline basis, seems to be well founded.

The origin of salts is very much, or rather totally, unknown. Some eminent chemists, particularly Stahl, have supposed that the number of substances truly and essentially saline is very small; nay, that there is but one saline principle in nature. This principle they suppose to be the vitriolic acid, as being the most simple and indestructible of them all. Stahl delivers his opinion on this subject in the following words: "That he considers the vitriolic acid as the only substance essentially saline; as the only saline principle which, by uniting more or less intimately with other substances that are not saline, is capable of forming an innumerable multitude of other saline matters, which nature and art shew us; and, secondly, that this saline principle is a secondary principle, composed only by the intimate union of two primary principles, water and earth.

In support of this theory Mr Macquer argues in the following manner: "Every true chemist will easily discover that this grand idea is capable of comprehending by its generality, and of connecting together, all the phenomena exhibited by saline substances. But we must at the same time acknowledge, that when we examine the proofs upon which it is founded, although it has a great appearance of truth by its consistency with the principles of chemistry, and with many phenomena, yet it is not supported by a sufficient number of facts and experiments to ascertain its truth. We might here examine what degree of probability ought to be granted to this theory of salts; but this could not be properly accomplished, without entering into long details, and penetrating into the depths of chemistry. We are therefore obliged to relate only what is most essential to be known concerning this grand hypothesis. We may perceive at once, that the former of those propositions, upon which is founded the theory which we mentioned, cannot be demonstrated, unless it be previously proved that every saline matter, excepting pure vitriolic acid, is nothing but this same acid differently modified, the primary properties of which are more or less altered or disguised by the union contracted with other substances. But we confess, that chemists are not capable of proving decisively this opinion; which, however, will appear very probable from the following reflections.

"First, Of all saline matters known, none is so strong,

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so unalterable, so eminently possessed of saline properties, as vitriolic acid."

The vitriolic acid, when combined with other substances, forms vitriolic salts, which vary both in specific names and properties, according to the various substances with which the acid is combined. Thus the vitriolic acid, combined with mineral alkali, forms the salt called *Glauber's salt*, or *sal mirabile*. When it is combined with calcareous earths, it forms vitriolic salts with bases of calcareous earth, which are commonly called *selenites*. When combined with argillaceous earths, it forms alum. When combined with metals, it forms vitriolic salts with metallic bases, to which the general name *vitriols* is given; and in commerce are commonly called *copperas*. The vitriols principally used are, 1. The martial vitriol; called also *English vitriol*, *green vitriol*, or *green copperas*, which is a combination of vitriolic acid with iron. 2. The vitriol of copper, called also *blue vitriol*, *Cyprian vitriol*, or *blue copperas*; which is a combination of vitriolic acid and copper. 3. The vitriol of zinc, called also *white copperas*, and *Gesslar vitriol*, which is a combination of the same acid with a femimetal called *zinc*. It is a property peculiar to the vitriolic acid, that all the combinations of it, with those substances with which it can form neutral salts, are susceptible of crystallization.

"Secondly, Amongst the other saline substances, those which appear most active and most simple, as nitrous and marine acids, are at the same time those whose properties most resemble the properties of vitriolic acid."

The nitrous acid, combined with all the substances with which it can mix, forms saline substances, in general called *nitrous salts*; specifying each particular salt by the name of the substance united to the acid. Thus nitrous acid, with fixed vegetable alkali, forms a saline substance called *nitre*, or *saltpetre*. With mineral alkali, forms cubic or quadrangular nitre. When mixed with metallic substances, forms metallic nitres, which are specified *nitre of gold*; *nitre of silver*, or *lunar nitre*, *lunar crystals*, and *crystals of silver*, *nitrous crystals of mercury*; *nitre of copper*, &c.

"Thirdly, We may give to vitriolic acid many of the characteristic properties of nitrous acid, by combining it in a certain manner with the inflammable principle, as we see in the volatile sulphureous acid; and even, according to an experiment of Mr Piech, related in a memoir concerning the origin of nitre, which gained the prize of the academy of Berlin, vitriolic acid, mixed with vegetable and animal matters susceptible of fermentation, is really transformed into a nitrous acid by the putrefaction of these matters. See CHEMISTRY, n° 720.

"Fourthly, The marine acid, although its principles are less known than those of the nitrous acid, may be approximated to the character of vitriolic and nitrous acids by certain methods. This acid, after it has been treated with tin and other metallic matters, is capable of forming either with spirit of wine, as vitriolic acid does, which it cannot do in its natural state; and when iron is dissolved in it, it seems to be approximated to the nature of nitrous acid. Reciprocally,

the approximation of vitriolic acid to the character of marine acid seems not impossible. Having once distilled very pure vitriolic acid upon a considerable quantity of white arsenic, I was struck with a strong smell like that of marine acid, which was not either that of arsenic or of vitriolic acid; for this has no smell when it is pure."

The marine acid, combined with various matters, forms marine salts, or simply salts, specified by the names of their particular bases. The sea-salt, or kitchen salt, and sal gem, are combinations of marine acid and mineral alkali. When this acid is combined with volatile alkali, it forms sal ammoniac (A.) With metals it forms metallic salts, called *salt of gold*, *salt of copper*, &c. according to the various metals combined with the acid. The salt of silver is also called *luna cornea*; the salt of lead is often called *plumbum corneum*; and the salts of antimony, and of arsenic, are known by the names of *butter of antimony*, and *butter of arsenic*.

"Fifthly, Oily vegetable acids become so much stronger, and more similar to vitriolic acid, as they are more perfectly deprived of their oily principle, by combining them with alkalis, earths, or metals; and afterwards by separating them from these substances by distillation, and especially by frequently repeating these operations. They might perhaps be reduced to a pure vitriolic acid, by continuing sufficiently this method: and reciprocally, vitriolic and nitrous acids, weakened by water, and treated with much oily matters, or still better with spirit of wine, acquire the characters of vegetable acids. We may see a remarkable instance of this in Mr Pott's dissertation *De acido nitri vinoso*. [The most remarkable experiment in which is related under the article CHEMISTRY, n° 781.]

"Sixthly, The properties of fixed alkalis seem to be very different from those of acids in general, and consequently of vitriolic acid. Yet if we consider that a large quantity of earth enters their composition; that much of it may be separated by repeated solutions and calcinations; and also, that by depriving these saline substances of their earthy principles, they become less fixed, more deliquescent, and, in a word, more similar to vitriolic acid in this respect;—we shall not think it improbable, that fixed alkalis owe their saline properties to a saline principle, of the nature of vitriolic acid, but much disguised by the quantity of earth, and probably of inflammable principle, to which it is united in these combinations. The properties of volatile alkalis, and the transformation of fixed alkali, or of its materials, into volatile alkali in putrefaction, and in several distillations, seem to show sufficiently that they are matters essentially saline, as fixed alkalis are, and that their volatility which distinguishes them proceeds from their containing a less quantity of earth, but more attenuated, and a portion of very subtil and volatile oil, which enters their composition. [For some other particulars relating to the transmutation of salts, see CHEMISTRY, n° 784.]

"Besides these principal facts, there are many others, too numerous to be even slightly mentioned here; they may be found scattered in the works of chemists, particularly of Stahl. But persons who would collect and compare all the experiments relating to this subject,

(A) Ammoniacal salts is also a general name given to all neutral salts composed of an acid saturated with a volatile alkali.

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subject, ought to know, that many of them are not sufficiently ascertained; and that perhaps a greater number of them have not been sufficiently prosecuted, and are, properly speaking, only begun. We must even acknowledge, that many of those experiments which we have mentioned have not been sufficiently prosecuted.

"The second fundamental proposition of the theory of salts, namely, 'That the vitriolic acid is compounded of only the aqueous and earthy principles,' is, like the first, supported by many facts which give it a degree of probability, but which do not amount to a complete demonstration. This proposition may be supported by the following considerations.

"First, Experience constantly shows, that the properties of compound bodies are always the result of those of the component parts of these bodies, or rather they are the properties of these component bodies modified by one another.

"Thus, if a body be composed of two principles, one of which is fixed and the other volatile, it will have a less degree of fixity than the former, and a less volatility than the latter. If it be composed of two principles, one of which is specifically heavier than the other, its specific gravity will be greater than that of one of them, and less than that of the other. The same observation is applicable to all the other essential properties, excepting those which destroy each other; as, for instance, the tendency to combination, or the dissolving power; for these latter properties are weakened so much more in the compounds as their principles are more strongly united, and in more just proportion.

"We observe, nevertheless, that the properties of compound bodies are not always exactly intermediate betwixt the properties of the component bodies; for, to produce this mean, the quantities of each of the component parts must be equal, which is the case in few or no compounds.

"Besides, some particular circumstances in the manner in which the principles unite with one another, contribute more or less to alter the result of the combined properties: for instance, experience shows, that when several bodies, particularly metals, are united together, the specific gravities of which are well known, the alloy formed by such union has not the precise specific gravity which ought to result from the proportion of the alloyed substances; but that in some alloys it is greater and in others less. But we are certain, on the other side, that these differences are too inconsiderable to prevent our distinguishing the properties of the principles in the compounds which they form, especially when they have very different properties.

"These things being premised, when we examine well the properties of vitriolic acid, we shall easily find that they partake of the properties of the aqueous and of the earthy principles.

"First, When this acid is as pure as we can have it, it is like the purest water and the purest vitrifiable earths, free from colour or smell, and perfectly transparent.

"Secondly, Although we cannot deprive the vitriolic acid of all the water superabundant to its saline essence, and therefore its precise specific gravity has not been determined, we know that when it is well

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concentrated, it is more than twice as heavy as pure water, and much less heavy than any earthy substance.

"Thirdly, This acid is much less fixed than any pure earth, since, however well it may be concentrated, it may always be entirely distilled; for which purpose a much stronger degree of heat is requisite than for the distillation of pure water.

"Fourthly, We do not know the degree of solidity of vitriolic acid, or the adhesion of aggregation, which its integrant parts have one to another, because for this purpose the vitriolic acid ought to be deprived of all superabundant water: but if we judge of it by the solid consistence of this acid when highly concentrated, as we see from the vitriolic acid called *glacial*, the integrant parts of this acid seem susceptible of a much stronger adhesion than those of pure water; but much less than those of earth, as we see from the instance of hard stones.

"Fifthly, The union which this acid contracts with water and with earths, shows that these substances enter into its composition; for we know, that in general compounds are disposed to unite superabundantly with the principles which compose them. All these properties of vitriolic acid, which so sensibly partake, and much more than any other acid, of the properties of earth and of water, are sufficient to induce us to believe that it is composed of these two principles; but it has one very eminent property, which is common with it to neither water nor pure earth, which is, its violent and corrosive taste. This property is sufficient to raise doubts, if we could not explain it from principles, which seem certain and general, relating to the combination of bodies.

"We observe, then, concerning the property now in question, that is, of taste in general, that it can only be considered as an irritation made upon the organs of taste by sapid bodies; and if we reflect attentively upon it, we shall be convinced, that no substance that is not impressed by some impulse can irritate or agitate our sensible organs, but by a peculiar force of its integrant parts, or by their tendency to combination; that is, by their dissolving power. According to this notion, the taste of bodies, or the impression made upon our sensible organs by their tendency to combination, or by their dissolving power, are the same property; and we see accordingly, that every solvent has a taste, which is so much more strong as its dissolving power is greater; that those whose taste is so violent that it amounts to acrimony, corrosion, and causticity, when applied to any other of the sensible parts of our body besides the organs of taste, excite in them itching and pain.

"This being premised, the question is, How earth, in which we perceive no taste nor dissolving power, and water, which has but a very weak dissolving power, and little or no taste, should form by their combination a substance, such as the vitriolic acid is, powerfully corrosive and solvent?

"To conceive this, let us consider, first, that every part of matter has a power by which it combines, or tends to combine, with other parts of matter. Secondly, that this force, the effects of which are perceptible, in chemical operations, only among the very small molecules, or the integrant and constituent parts of bodies, seems proportionable to the density or specific gravity of these parts. Thirdly, that this same force is limited

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in every integrant molecule of matter: that if we consider this force as not satisfied, and consequently as a simple tendency to combination, it is the greatest possible in an integrant molecule of matter perfectly insulated; or attached to nothing; and is the smallest possible, or none, when it is satisfied by its intimate combination with other parts capable of exhausting all its action; its tendency being then changed into adhesion.

"Hence we may infer, that the integrant parts of the earthy principle have essentially, and like all the other parts of matter, a force of tendency to union, or of cohesion in union, according to their condition; that as this earthy principle has a much more considerable density or specific gravity than all other simple bodies that we know, we may probably presume that its primary integrant molecules have a more considerable force of tendency to union, in the same proportion, than the integrant parts of other principles; that consequently when they cohere together, and form an aggregate, their aggregation must also be stronger and firmer than that of any other body. Accordingly we see, that the purest earthy substances, whose parts are united and form masses, such as, for instance, the stones called *vitriifiable*, are the hardest bodies in nature. We are no less certain, that as the tendency of the parts of matter to unite is so much less evident as it is more exhausted and satisfied in the aggregation, the parts of the earthy principle being capable of exhausting mutually all their tendency to union, we may thence infer, that every sensible mass of pure earthy matter must appear deprived of any dissolving power; of taste; in a word, of tendency to union from the firmness of its aggregation. But we may also infer, that when these primary integrant parts of the earthy principle are not united together in aggregation, then, resuming all the activity and tendency to union which are essential to them, they must be the strongest and most powerful of all solvents.

"These being premised, if we suppose again, with Stahl and the best chemists, that, in the combination of the saline principle or of vitriolic acid, the parts of the earthy principle are united, not with each other, as in the earthy aggregation, but with the primary parts of the aqueous principle, each to each, we may then easily conceive, that the primary integrant parts of the water, having essentially much less tendency to combination than those of earth, the tendency of these latter to union will not be exhausted, but satisfied only partly, by their combination with the former; and that consequently a compound must result, the integrant parts of which will have a strong dissolving power, as vitriolic acid is.

"We may see from hence how much mistaken chemists are, who, considering earth only in its aggregation, or rather not attending to this state, and not distinguishing it from that state in which the parts of this same earth are so separated from each other by the interposition of another body, that they cannot touch or cohere together, have considered the earthy principle as a substance without force or action, and have very improperly called that a *passive principle*, which of all others is the strongest, most active, and most powerful.

"However this general theory of salts may conform with the most important phenomena of chemistry, we must acknowledge, that it can only be proposed as a systematical opinion, till it be evidently demonstrated

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by the decisive means employed in chemical demonstrations, namely, by decomposition and recombination: thus, if we could reduce vitriolic acid to earth and water, and make that acid by combining together these two principles, this theory would cease to be a system, and would become a demonstrated truth. But we must confess, that this theory is less supported by experiment than by argument, from the many difficulties that are inevitable in such inquiries. For on one side, we know that the simpler bodies are, the more difficult is their decomposition; and on the other side, the stronger the aggregation is, the greater is the difficulty of making it enter into a new combination. Thus, as vitriolic acid is very simple, since it is a compound of the first order, it ought strongly to resist decomposition; and as the aggregation of pure earth is the firmest that we know, it cannot easily be made to enter as a principle into a new combination with water to form a saline matter. The following are the principal experiments which have been made relative to the subject.

"First, We seem to be certain, from many proofs, that all saline substances, comprehending those that contain vitriolic acid, as vitriolated tartar, Glauber's salt, and other vitriolated salts which are sufficiently fixed to support a perfect drying, or rather calcination, being alternately dissolved, dried, and calcined a number of times, are more and more diminished in quantity, and that earth and water are separated from them each operation. But alkaline salts appear to be still more susceptible than any other saline matter of this kind of decomposition.

"Secondly, When nitre is burnt in close vessels, so that we may retain not only all that remains fixed after this burning, but also what exhales in vapours, as in the experiment of the clyffus of nitre, we have a proof which seems decisive, that the mineral acid of this salt, which is not very far from the simplicity of vitriolic acid, is totally decomposed and reduced into earth and water. For if we examine the fixed residuum in the retort, we find that it is only the alkali that was contained in the nitre, charged with a superabundant earth, which is separable from it by solution and filtration. And if the liquor in the receiver, formed by the vapours condensed there, be examined, which ought to be nitrous acid; if this acid had not been destroyed, we find, that, so far from being acid, it is only pure water, sometimes even charged with a little fixed alkali, which had been raised by the force of the detonation. Thus nitrous acid is made to disappear in this experiment, and in its place we find only earth and water.

"Thirdly, The phenomena of limestone, which by calcination and extinction in water acquires saline properties that it had not before its attenuation by fire and its combination with water; and also the experiment of Beccher, who asserts, that if a *vitriifiable* stone be alternately made red hot, and extinguished in water a number of times, it may be so attenuated that it shall be like a saline gelatinous matter; these, I say, show that saline matters are actually formed by the intimate combination of the very attenuated parts of earth with those of water. We find in the writings of Beccher and Stahl, and particularly in the *Specimen Beccherianum* of the latter author, many other observations and experiments tending to prove the same proposition; but we must confess, that none of the experiments we have mentioned, excepting that of the decomposition

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of nitrous acid by burning, are absolutely decisive; principally because they have not been sufficiently repeated or prosecuted, nor carefully enough examined in all their circumstances."

On this theory it is obvious to remark, that our author has omitted to mention the most active part of the composition of salts, namely elementary fire. Of this both acids and alkalis undoubtedly contain a great quantity in a very active state, as is evident from their performing the effects of fire when applied to certain substances; nay, from their actually bursting into flame when mixed with some kinds of oils. For an explanation of the reason of which, see HEAT, and the various detached articles relative to that subject. Whatever doubts we may have of the power of mere water combined with mere earth to affect the organs of taste, we can have none that the element of fire is capable of so doing; and from the very tasting of these substances, we may be assured, that whatever gives that peculiar sensation to the tongue which we call *acid* or *alkaline*, gives also the other properties of the salt, whatever they may be. In alkalis, no doubt the greatest part of the composition is earth; but from what has been said on QUICKLIME, it appears, that mere earth, by the artificial action of fire alone, acquires all the properties of salt, that of crystallizing *per se* excepted: it seems probable therefore, that, in the more perfect operations of nature, the same materials are used; only the proportions are such, that the substance is more soluble, and its causticity greater, than even quicklime itself. With regard to acids, the earthy parts seem to be fewer; and in all probability the most considerable ingredient in their composition is water: but in what manner this element is united to that of fire so as to produce the peculiar phenomena of acids, cannot be explained.

The acid of tartar (the purest part of which, or that saline substance which first crystallizes by evaporation in the vessels in which it is purified, is called *cream of tartar*), and also all other concrete vegetable acids analogous to it, when mixed with various other substances, form compounds, generally called *tartareous salts*, or *soluble tartars*, because they are dissolved by water more easily than the acid of tartar itself. Acetous salts, that is, all salts containing the acid of vinegar, are also combined with various bases, and form saline substances of different names; the principal of which are, the acetous salt of copper, called *crystals of Venus*, or of *verdigris*, by the chemists, and *distilled* or *crystallized verdigris* in commerce; the acetous salt of lead, commonly called *salt* or *sugar of lead*; and the acetous mercurial salts. Sugar is an essential vegetable salt, of a pleasant sweet taste, containing a vegetable acid combined with earth and oil.

Potash is a fixed vegetable alkali, extracted from the ashes of wood. Concrete volatile alkalis are generally called *volatile salts*; although this name is sometimes also given to the volatile salt of amber, which is not an alkaline but an acid salt. Borax is a neutral saline matter, whose origin, whether animal or vegetable, is as yet unknown, its components being not sufficiently examined. It is soluble in water, and very nearly as crystallizable as alum. When borax is exposed to the fire, it first bubbles and foams very much, but afterwards it melts into a clear glass. When acids are combined with the alkaline part of borax, a substance of a singular na-

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ture is separated from it, commonly called *sedative salt*. Although this substance acts as an acid in borax, by saturating its alkali, yet it has no acid taste, nor doth it turn the tincture of heliotropium to a red, as other acids do. It is the property of borax to facilitate considerably the fusion of metals, of earths, and other minerals. Some species of stones and earths cannot be vitrified at all, except they are mixed with borax. For this property borax is commonly used as a flux (that is, a substance which facilitates the fusion of other bodies) in various manufactories; but especially in soldering metals, and in assaying ores. Phosphoric salts are combinations of alkaline, earthy, and metallic substances with the acid obtained from the phosphorus of urine. Besides the above-mentioned salts, there are several others to be met with in the writings of the chemical and medical authors; but, as they are of little consequence, we shall omit any account of them.

Some new neutral salts have been formed by the dephlogisticated marine, or, according to the new theory, the oxygenated muriatic acid.—This was first taken notice of by M. Berthollet, and the discovery is thus illustrated by Dr Dollfus, in Crell's Annals for the year 1788, vol. i. p. 319.

"In the month of November 1786 (says he), whilst I was preparing to translate Higgins's experiments respecting the acetous acid, I found the following amongst the numerous observations which that work contains, p. 180. 'The acid elastic fluid which issues, when two pounds of manganese are mixed and distilled with two or three of ordinary spirit of sea-salt, may all, except a small portion of phlogistic air, be condensed in a solution of fixed vegetable alkali; and the solution thus impregnated yields a considerable quantity of nitre, which crystallizes in the ordinary form, and detonates on red-hot coals. The solution at the same time yields regenerated sea-salt.' The part of this proposition which relates to the form of the crystals and to their detonation is sufficiently plain; but that I might have a still more complete conviction on the subject, I repeated the experiment upon a small scale.

"For this purpose I put into a vial an ounce of pulverised oxyd (*calx*) of manganese with an ounce and a half of muriatic acid, and by means of a bent tube I directed the vapour into another vial, which contained a solution of vegetable alkali. I then distilled by the gentle heat of a small lamp. From the vial containing the alkali went a second tube, for the purpose of carrying off the air which I hoped to obtain by this process.

"As soon as the oxygenated muriatic acid appeared, some air escaped through the tube, which showed all the properties of common atmospheric air; and as soon as all the air which the vials contained previous to the distillation had been expelled, no more such air appeared. The vapours of the oxygenated muriatic acid were absorbed by the solution of vegetable alkali, without the extrication of the smallest portion of carbonic acid (fixed air) from the alkali. As fast as the alkali, which adhered to the sides of the glass, absorbed the acid vapour, prismatic crystals appeared; and many more, which I obtained a few hours afterwards, were formed in the liquor. Although these crystals detonated in the fire, they had a taste very different from that of nitre. It was extremely pungent, and was rendered still

more

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more intolerable by the suffocating odour of the nitromuriatic acid (*aqua regia*). In order to complete the crystallization, I evaporated in the same vial the remaining liquor. As soon as the vapour appeared, a quantity of carbonic acid was disengaged, and afterwards some atmospheric air. The salt which I obtained by crystallization after the evaporation was a true muriat of potash, which did not detonate in the fire. Probably Mr Higgins performed the operation in the way I have described; but he was too hasty in concluding this salt to be nitre merely because it detonated. I gave an account of this experiment to Mr Kirwan at the time, and soon after communicated it to Professor Gadolin, who offered to assist me in repeating the experiment.

"We agreed to employ crystallized carbonat of soda (mild mineral alkali); and the following was the result of our experiment. We dissolved some of this carbonat in a large quantity of water, and we employed two or three hours a day, for several successive days, in introducing into the solution as much oxygenated muriatic gas as was sufficient entirely to saturate it; we then poured the saline liquor into a glass basin, and left it covered over to evaporate spontaneously. After some time a number of prismatic crystals were formed, which detonated in the fire like nitre. They occasioned a brown precipitate from a solution of iron in sulphuric or vitriolic acid; and mixed with sal ammoniac, they gave out a strong ammoniacal odour, accompanied with some effervescence, which was to be attributed to the extrication of fixed air during the mixture. The remaining part of the liquor evaporated again, produced fresh crystals, which, though they certainly had a faint smell of oxygenated muriatic acid, in reality consisted partly of muriat of soda (common salt), and partly of uncombined soda; for they did not detonate, and they precipitated iron of a light green colour. The liquor which appeared above these crystals, however, had not yet entirely lost the smell of the oxygenated muriatic acid. Since this, M. Gadolin has made the following experiment, which he communicated to me. He put two drams of magnesia, saturated with carbonic acid, into an ounce and a half of water, into which he introduced during several hours a quantity of oxygenated muriatic gas. The water evidently acquired the odour of the oxygenated muriatic acid. He filtered the liquor, and washed and dried that part of the magnesia which had not been dissolved, and which weighed one dram 4-5ths, so that the water was found to have dissolved 1-5th of a dram. As soon as the liquor began to boil, a strong effervescence was occasioned, some oxygenated muriatic gas was disengaged, and a small quantity of carbonat of magnesia was precipitated. When the liquor had become cool, it was filtered, that it might be separated from the precipitated powder. It had still the same odour; and on being again heated, an effervescence similar to the first took place, and a fresh quantity of carbonat of magnesia was separated. This phenomenon appeared every time M. Gadolin boiled the liquor after its cooling, till at last he had evaporated it to dryness, when there still remained a small quantity of magnesia. Hence M. Gadolin concludes, that water, oxygenated muriatic acid, and carbonat of magnesia, form a combination which heat does not decompose till the vapour of the water carries off the oxygenated muriatic acid, at which time the carbonat of magnesia is precipi-

tated. In consequence of what we have now related, we ought to reckon, in addition to the two salts discovered by M. Berthollet, another salt, to which, according to the new French nomenclature, might be given the name *urias oxygenatus magnesiæ liquidus*, because we cannot obtain it in a concrete form. The oxygenated muriatic acid appears to enter into a very different, or at least into a much more intimate, combination with the metals; a subject which greatly merits the attention of the chemist.

The probability of this proposition is strengthened by the theory of M. Berthollet; according to which the mercury in corrosive muriat of mercury (corrosive sublimat) is combined with the oxygenated muriatic acid, so as not to be separated from it without great difficulty.

Common SALT, or *Sea-Salt*, the name of that salt extracted from the waters of the ocean, which is used in great quantities for preserving provisions, &c.

It is a perfect neutral salt, composed of marine or muriatic acid, saturated with mineral alkali. It has a saline but agreeable flavour. It requires about four times its weight of cold water to be dissolved, and nearly the same quantity of boiling water, according to Macquer. But according to Kirwan, it only requires 2,5 its weight of water to be dissolved in the temperature of sixty degrees of Fahrenheit. This salt always contains some part formed with a calcareous base; and, in order to have it pure, it must be dissolved in distilled water; then a solution of mineral alkali is to be poured in it until no white precipitation appears; then by filtrating and evaporating the solution, a pure common salt is produced. Its figure is perfectly cubic, and those hollow pyramids, or *tremies* as the French call them, as well as the parallelopipeds formed sometimes in its crystallization, consist all of a quantity of small cubes disposed in those forms. Its decrepitation on the fire, which has been reckoned by some as a characteristic of this salt, although the vitriolated tartar, nitrous lead, and other salts, have the same property, is owing chiefly to the water, and perhaps also to the air of its crystallization.

Its specific gravity is 2,120 according to Kirwan. The acid of tartar precipitates nothing from it. One hundred parts of common salt contain thirty-three of real acid, fifty of mineral alkali, and seventeen of water. It is commonly found in salt water and salt springs, in the proportion of even thirty-six *per cent*. It is found also in coals, and in beds of gypsum. This salt is unalterable by fire, though it fuses, and becomes more opaque: nevertheless a violent fire, with the free access of air, causes it to evaporate in white flowers, which stick to the neighbouring bodies. It is only decomposed, as Macquer affirms, by the vitriolic and nitrous acid; and also by the boracic or sedative salt. But although nitre is decomposed very easily by arsenic, this neutral marine salt is nowise decomposed by the same. According to Mongez, the fixed vegetable alkali, when caustic, decomposes also this marine salt. It preserves from corruption almost all sorts of animal food much better for use than any other salt, as it preserves them without destroying their taste and qualities; but when applied in too small a quantity, it then forwards their corruption.

Of this most useful commodity there are ample stores on land as well as in the ocean. There are few countries which

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which do not afford vast quantities of rock or fossil salt. Mines (A) of it have long been discovered and wrought in England, Spain, Italy, Germany, Hungary, Poland, and other countries of Europe. In several parts of the world, there are huge mountains which wholly consist of fossil salt. Of this kind are two mountains in Russia, nigh Astracan; several in the kingdoms of Tunis and Algiers, in Africa; and several also in Asia; and the whole island of Ormus in the Persian gulf almost entirely consists of fossil salt. The new world is likewise stored with treasures of this useful mineral, as well as with all other kinds of subterranean productions. Moreover, the sea affords such vast plenty of common salt, that all mankind might thence be supplied with quantities sufficient for their occasions. There are also innumerable springs, ponds, lakes, and rivers, impregnated with common salt, from which the inhabitants of many countries are plentifully supplied therewith. In some countries which are remote from the sea, and have little commerce, and which are not blessed with mines of salt or salt-waters, the necessities of the inhabitants have forced them to invent a method of extracting their common salt from the ashes of vegetables. The muriatic salt of vegetables was described by Dr Grew under the title of *lixivated marine salt*. Leeuwenhoek obtained cubical crystals of this salt from a lixivium of soda or kelp, and also from a solution of the lixivial salt of carduus benedictus; of which he hath given figures in a letter to the Royal Society, published in N^o 173. of their Transactions. Dr Dagner, in *Act. Acad. N. C.* vol. v. obs. 150. takes notice of great quantities of it which he found mixed in pot-ashes. And the ingenious Dr Fothergill extracted plenty of it from the ashes of fern: See *Medical Essays*, vol. v. article 13.

The muriatic salt which the excellent Mr Boyle extracted from sandiver, and supposed to be produced from the materials used in making glass, was doubtless separated from the kelp made use of in that process. Kunckel also informs us, that he took an alkaline salt; and after calcining it with a moderate fire, dissolved it in pure water, and placing the solution in a cool cellar, obtained from it many crystals of a neutral salt. He supposes, that the alkaline salt was by the process converted into this neutral salt. But it is more reasonable to believe, that the alkaline salt which he applied was not pure, but mixed with the muriatic salt of vegetables, which by this process was only separated from it.

It is doubtless chiefly this muriatic salt which, in some of the inland parts of Asia, they extract from the ashes of duck-weed and of Adam's fig-tree, and use for their common salt.

That they are able in those countries to make common salt to profit from vegetables, ought not to be wondered at, since in Dehli and Agra, capitals of Indostan, salt is so scarce as usually to be sold for half-a-crown a pound. We may therefore give some credit to Marco Polo, when he informs us, that in the inner parts of the same quarter of the world, in the province

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of Caidu, lying west of Tebeth, the natives used salt instead of money, it being first made up in cakes, and sealed with the stamp of their prince; and that they made great profit of this money by exchanging it with the neighbouring nations for gold and musk. We are also told by Ludolfus, in his *Historia Æthiopica*, that in the country of the Abyssines there are mountains of salt, the which when dug out is soft, but soon grows hard; and that this salt serves them instead of money to buy all things. The same is confirmed by Ramusio.

Mr Boyle discovered common salt in human blood and urine. "I have observed it (says Mr Brownrigg), not only in human urine, but also in that of dogs, horses, and black cattle. It may easily be discovered in these, and many other liquids impregnated with it, by certain very regular and beautiful starry figures which appear in their surfaces after congelation. These figures I first observed in the great frost in the year 1739. The dung of such animals as feed upon grass or grain, doth also contain plenty of common salt."

Naturalists, observing the great variety of forms under which this salt appears, have thought fit to rank the several kinds of it under certain general classes; distinguishing it, most usually, into rock or fossil salt, sea-salt, and brine or fountain salt. To which classes, others might be added, of those muriatic salts which are found in vegetable and animal substances. These several kinds of common salt often differ from each other in their outward form and appearance, or in such accidental properties as they derive from the heterogeneous substances with which they are mixed. But when perfectly pure, they have all the same qualities; so that chemists, by the exactest inquiries, have not been able to discover any essential difference between them; for which reason we shall distinguish common salt after a different manner, into the three following kinds, viz. into rock or native salt, bay salt, and white salt.

By *rock salt*, or *native salt*, is understood all salt dug out of the earth, which hath not undergone any artificial preparation. Under the title of *bay salt* may be ranked all kinds of common salt extracted from the water wherein it is dissolved, by means of the sun's heat, and the operation of the air; whether the water from which it is extracted be sea-water, or natural brine drawn from wells and springs, or salt water stagnating in ponds and lakes. Under the title of *white salt*, or *boiled salt*, may be included all kinds of common salt extracted by coction from the water wherein it is dissolved; whether this water be sea water, or the salt water of wells, fountains, lakes, or rivers; or water of any sort impregnated with rock-salt, or other kinds of common salt.

The first of these kinds of salt is in several countries found so pure, that it serves for most domestic uses, without any previous preparation (triture excepted); for of all natural salts rock-salt is the most abundantly furnished by nature in various parts of the world, being found in large masses, occupying great tracts of land. It is generally formed in strata under the surface of the

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earth,

(A) Amongst the salt mines of chief note are those of Northwich in Cheshire, Altemonte in Calabria, Hall in Tyrol, Cardona in Catalonia: also those stupendous mines at Wilieczka of Poland, and Soowar in Upper Hungary; of which see accounts in Phil. Trans. No 61. and 413.

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earth, as in Hungary, Moscovy, Siberia, Poland, Calabria, Egypt, Ethiopia, and the East Indies. "In England (says Magellan), the salt mines at Northwich are in a high ground, and contain it in layers or strata of various colours, of which the yellow and brown are the most plentiful, as I have observed on the spot, which I visited in June 1782, in company with my worthy and learned friend Mr Volta, professor of Natural Philosophy in the University of Pavia, and well known by his great abilities, and many discoveries in that branch of knowledge. The mine into which we descended was excavated in the form of a vast dome or vault under ground, supported by various columns of the salt, that were purposely left to support the incumbent weight. And the workmen having lighted a number of candles all round its circumference, it furnished us with the most agreeable and surprising sight, whilst we were descending in the large tub, which serves to bring up the lumps that are broken from the mine, &c. See the description of the famous salt-mines of Wilieczka in Poland, by Mr Berniard, in the *Journal de Physique*, vol. 16. for 1780, pag. 459, in which the miraculous tales concerning those subterraneous habitations, villages, and towns, are reduced to their proper magnitude and estimate." But the English fossil salt is unfit for the uses of the kitchen, until by solution and coction it is freed from several impurities, and reduced into white salt. The British white salt also is not so proper as several kinds of bay salt for curing fish and such flesh-meats as are intended for sea provisions, or for exportation into hot countries. So that for these purposes we are obliged, either wholly or in part, to use bay salt, which we purchase in France, Spain, and other foreign countries.

However, it does not appear that there is any other thing requisite in the formation of bay salt than to evaporate the sea-water with an exceedingly gentle heat; and it is even very probable, that our common sea salt by a second solution and crystallization might attain the requisite degree of purity. Without entering into any particular detail of the processes used for the preparation of bay-salt in different parts of the world, we shall content ourselves with giving a brief account of the best methods of preparing common salt.

Brownrigg
on the Art
of Preparing
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At some convenient place near the sea-shore is erected the saltern. This is a long, low building, consisting of two parts; one of which is called the *fore-house*, and the other the *pan-house*, or *boiling-house*. The fore-house serves to receive the fuel, and cover the workmen; and in the boiling-house are placed the furnace, and pan in which the salt is made. Sometimes they have two pans, one at each end of the saltern; and the part appropriated for the fuel and workmen is in the middle.

The furnace opens into the fore-house by two mouths, beneath each of which is a mouth to the ash-pits. To the mouths of the furnace doors are fitted; and over them a wall is carried up to the roof, which divides the fore-house from the boiling-house, and prevents the dust of the coal and the ashes and smoke of the furnace from falling into the salt pan. The fore-house communicates with the boiling-house by a door, placed in the wall which divides them.

The body of the furnace consists of two chambers, divided from each other by a brick partition called the *mid-feather*; which from a broad base terminates in a

narrow edge nigh the top of the furnace; and by means of short pillars of cast iron erected upon it, supports the bottom of the salt pan; it also fills up a considerable part of the furnace, which otherwise would be too large, and would consume more coals than, by the help of this contrivance, are required. To each chamber of the furnace is fitted a grate, through which the ashes fall into the ash-pits. The grates are made of long bars of iron, supported underneath by strong cross bars of the same metal. They are not continued to the farthest part of the furnace, it being unnecessary to throw in the fuel so far: for the flame is driven from the fire on the grate to the farthest part of the furnace; and from thence passes together with the smoke, through two flues into the chimney; and thus the bottom of the salt pan is everywhere equally heated.

The salt pans are made of an oblong form, flat at the bottom, with the sides erected at right angles; the length of some of these pans is 15 feet, in breadth 12 feet, and the depth 16 inches; but at different works they are of different dimensions. They are commonly made of plates of iron, joined together with nails, and the joints are filled with a strong cement. Within the pan five or six strong beams of iron are fixed to its opposite sides, at equal distances, parallel to each other and to the bottom of the pan, from which they are distant about eight inches. From these beams hang down strong iron hooks, which are linked to other hooks or clasps of iron firmly nailed to the bottom of the pan; and thus the bottom of the pan is supported, and prevented from bending down or changing its figure. The plates most commonly used are of malleable iron, about four feet and a half long, a foot broad, and the third of an inch in thickness. The Scots prefer smaller plates, 14 or 15 inches square. Several make the sides of the pan, where they are not exposed to the fire, of lead; those parts, when made of iron, being found to consume fast in rust from the steam of the pan. Some have used plates of cast iron, five or six feet square, and an inch in thickness; but they are very subject to break when unequally heated, and shaken (as they frequently are) by the violent boiling of the liquor. The cement most commonly used to fill the joints is plaster made of lime.

The pan, thus formed, is placed over the furnace, being supported at the four corners by brick work; but along the middle, and at the sides and ends, by round pillars of cast iron called *taplins*, which are placed at three feet distance from each other, being about eight inches high, and at the top, where smallest, four inches in diameter. By means of these pillars the heat of the fire penetrates equally to all parts of the bottom of the pan, its four corners only excepted. Care is also taken to prevent the smoke of the furnace from passing into the boiling-house, by bricks and strong cement, which are closely applied to every side of the salt pan. In some places, as at Blyth in Northumberland, besides the common salt pans here described, they have a preparing-pan placed between two salt pans, in the middle part of the building, which in other works is the fore-house. The sea-water being received into this preparing-pan, is there heated and in part evaporated by the flame and heat conveyed under it through flues from the two furnaces of the salt pans. And the hot water, as occasion requires, is conveyed through troughs

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from the preparing-pan into the salt pans. Various other contrivances have been invented to lessen the expence of fuel, and several patents have been obtained for that purpose; but the salt-boilers have found their old methods the most convenient.

Between the sides of the pan and walls of the boiling-house, there runs a walk five or six feet broad, where the workmen stand when they draw the salt, or have any other business in the boiling-house. The same walk is continued at the end of the pan, next to the chimney; but the pan is placed close to the wall at the end adjoining to the fore-house.

The roof of the boiling-house is covered with boards fastened on with nails of wood, iron nails quickly mouldering into rust. In the roof are several openings, to convey off the watery vapours; and on each side of it a window or two, which the workmen open when they look into the pan whilst it is boiling.

Not far distant from the saltern, on the sea-shore, between full sea and low-water marks, they also make a little pond in the rocks, or with stones on the sand, which they call their *sump*. From this pond they lay a pipe, through which, when the tide is in, the sea-water runs into a well adjoining to the saltern; and from this well they pump it into troughs, by which it is conveyed into their ship or cistern, where it is stored up until they have occasion to use it.

The cistern is built close to the saltern, and may be placed most conveniently between the two boiling-houses, on the back side of the fore-house; it is made either of wood, or brick and clay; it sometimes wants a cover, but ought to be covered with a shed, that the salt-water contained therein may not be weakened by rains, nor mixed with foot and other impurities. It should be placed so high, that the water may conveniently run out of it, through a trough, into the salt pans.

Besides the buildings already mentioned, several others are required; as store houses for the salt, cisterns for the bittern, an office for his majesty's salt-officers, and a dwelling-house for the salt-boilers.

All things being thus prepared, and the sea-water having stood in the cistern till the mud and sand are settled to the bottom, it is drawn off into the salt-pan. And at the four corners of the salt-pan, where the flame does not touch its bottom, are placed four small lead pans called *scratch pans*, which, for a salt-pan of the size above-mentioned, are usually about a foot and an half long, a foot broad, and three inches deep; and have a bow or circular handle of iron, by which they may be drawn out with a hook, when the liquor in the pan is boiling.

The salt pan being filled with sea-water, a strong fire of pit coal is lighted in the furnace; and then, for a pan which contains about 1400 gallons, the salt-boiler takes the whites of three eggs, and incorporates them well with two or three gallons of sea water, which he pours into the salt-pan while the water contained therein is only lukewarm; and immediately stirs it about with a rake, that the whites of eggs may every where be equally mixed with the salt-water.

Instead of whites of eggs, at many salterns, as at most of those near Newcastle, they use blood from the butchers, either of sheep or black cattle, to clarify the sea-

water: And at many of the Scots salterns they do not give themselves the trouble of clarifying it.

As the water grows hot, the whites of eggs separate from it a black frothy scum, which arises to the surface of the water, and covers it all over. As soon as the pan begins to boil, this scum is all risen, and it is then time to skim it off.

The most convenient instruments for this purpose are skimmers of thin ash boards, six or eight inches broad, and so long that they may reach above half way over the salt-pan. These skimmers have handles fitted to them; and the salt-boiler and his assistant, each holding one of them on the opposite sides of the pan, apply them so to each other that they overlap in the middle, and beginning at one end of the pan, carry them gently forward together, along the surface of the boiling liquor, to the other end; and thus, without breaking the scum, collect it all to one end of the pan, from whence they easily take it out.

After the water is skimmed, it appears perfectly clear and transparent; and they continue boiling it briskly, till so much of the fresh or aqueous part is evaporated, that what remains in the pan is a strong brine almost fully saturated with salt, so that small saline crystals begin to form on its surface; which operation, in a pan filled 15 inches deep with water, is usually performed in five hours.

The pan is then filled up a second time with clear sea-water drawn from the cistern; and about the time when it is half filled, the scratch-pans are taken out, and being emptied of the scratch found in them, are again placed in the corners of the salt-pan. The scratch taken out of these pans is a fine white calcareous earth found in the form of powder, which separates from the sea-water during its coction, before the salt begins to form into grains. This subtile powder is violently agitated by the boiling liquor, until it is driven to the corners of the pan, where the motion of the liquor being more gentle, it subsides into the scratch pans placed there to receive it, and in them it remains undisturbed, and thus the greatest part of it is separated from the brine.

After the pan hath again been filled up with sea-water, three whites of eggs are mixed with the liquor, by which it is clarified a second time, in the manner before described; and it is afterwards boiled down to a strong brine as at first; which second boiling may take up about four hours.

The pan is then filled up a third time with clear sea-water; and after that, a fourth time; the liquor being each time clarified and boiled down to a strong brine, as before related; and the scratch pans being taken out and emptied every time that the pan is filled up.

Then, at the fourth boiling, as soon as the crystals begin to form on the surface of the brine, they slacken the fire, and only suffer the brine to simmer, or boil very gently. In this heat they constantly endeavour to keep it all the time that the salt corns or granulates, which may be nine or ten hours. The salt is said to granulate, when its minute crystals cohere together into little masses or grains, which sink down in the brine and lie at the bottom of the salt pan.

When most of the liquor is evaporated, and the salt thus lies in the pan almost dry on its surface, it is then

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time to draw it out. This part of the process is performed by raking the salt to one side of the pan into a long heap; where it drains a while from the brine, and is then filled out into barrows or other proper vessels, and carried into the store-house, and delivered into the custody of his majesty's officers. And in this manner the whole process is performed in 24 hours; the salt being usually drawn every morning.

In the store-house the salt is put into drabs, which are partitions like stalls for horses, lined on three sides and at the bottom with boards, and having a sliding-board on the fore-side to put in or draw out as occasion requires. The bottoms are made shelving, being highest at the back-side, and gradually inclining forwards; by which means the saline liquor, which remains mixed with the salt, easily drains from it; and the salt, in three or four days, becomes sufficiently dry; and is then taken out of the drabs, and laid up in large heaps, where it is ready for sale.

The saline liquor which drains from the salt is not a pure brine of common salt, but hath a sharp and bitter taste, and is therefore called *bittern*; this liquor, at some works, they save for particular uses, at others throw away. A considerable quantity of this bittern is left at the bottom of the pan after the process is finished; which, as it contains much salt, they suffer to remain in the pan, when it is filled up with sea-water. But at each process this liquor becomes more sharp and bitter, and also increases in quantity: so that, after the third or fourth process is finished, they are obliged to take it out of the pan; otherwise it mixes in such quantities with the salt, as to give it a bitter taste, and disposes it to grow soft and run in the open air, and renders it unfit for domestic uses.

After each process there also adheres to the bottom and sides of the pan a white stony crust, of the same calcareous substance with that before collected from the boiling liquor. This the operators call *stone-scratch*, distinguishing the other found in the lead-pans by the name of *powder-scratch*. Once in eight or ten days they separate the stone-scratch from their pans with iron picks, and in several places find it a quarter of an inch in thickness. If this stony crust is suffered to adhere to the pan much longer, it grows so thick that the pan is burnt by the fire, and quickly wears away.

In M. de Pagés's Travels round the World, we find the following important fact. "I had been anxious (says that author) to ascertain by comparison, whether sea-water contains salt in greater quantity under the torrid than under the other zones; and my experiments on this subject served to show, contrary to what I expected, that sea-water is impregnated with salt in less quantity within than without the tropics." These experiments were made on a hundred pounds of sea-water, taken at the depth of ten fathoms, and weighed in water-scales. M. de Pagés has given a table of these experiments, from which it appears that 100 lb. of sea-water in $46^{\circ} 12'$ S. lat. gave $4\frac{1}{2}$ lb. of salt, and in $1^{\circ} 16'$ only $3\frac{1}{2}$ lb.; and that in 74° N. lat. it gave $4\frac{1}{4}$ lb. and in $4^{\circ} 22'$ only $3\frac{1}{2}$ lb. these being the highest and lowest latitudes in which the experiments were made, and also the greatest and least quantities of salt.

Duty on Salt, is a distinct branch of his majesty's

extraordinary revenue, and consists in an excise of 3 s. 4 d. per bushel imposed upon all salt, by several statutes of King William and other subsequent reigns. This is not generally called an excise, because under the management of different commissioners: but the commissioners of the salt-duties have, by statute 1 Ann. c. 21. the same powers, and must observe the same regulations, as those of other excises. This tax had usually been only temporary: but by statute 26 Geo. II. c. 3. was made perpetual.

Triple Salts, a kind of salts formed by the union of three ingredients; the common neutrals being composed only of two. They are but lately discovered; and it is chiefly to the industry of Mr Bergman that we owe the knowledge we have of them. Sometimes we meet even with salts of four ingredients; in which case we call the resulting compounds *quadruple salts*. The most remarkable of these complicated substances are the following.

1. *Aphronitrum*, or mineral alkali, combined with a small quantity of calcareous earth. The three ingredients here are fixed air, pure alkali, and calcareous earth. "This salt (says Cronstedt) is so strongly united with the calcareous earth, that the latter enters with it into the very crystals of the salt; though, by repeated solutions, the earth is by degrees separated from it, and falls to the bottom after every solution." Cartheuser asserts, that, on throwing into its solution in water a fixed mineral alkali, the calcareous earth was precipitated; and on the contrary, by adding oil of vitriol, nitrous acid was expelled, and a Glauber's salt produced; "from which (says M. Magellan) it is evident, that the aphronitrum is a triple salt arising from the combination of the nitrous acid with calcareous earth and mineral fixed alkali." Wallerius mentions three species of this salt; viz. one which contains only a mixture of calcareous earth with fixed mineral alkali. This, he says, is the aphronitrum of the ancients; but he thinks that it ought to be rather called *aphronatron*, as they bestowed the name of *natron* upon the mineral alkali. The second species is that described by Cronstedt under the title of *calcareous nitre*. The third is that described by Hoffman under the title of *aphronitrum jannense*, into whose composition the vitriolic acid enters. It is a kind of Glauber's salt, and is frequently confounded with it.

The aphronitrum of Cronstedt is described by him as appearing on old walls and below vaults, or in places where it cannot be washed away by the rain. When it contains any considerable quantity of calcareous earth, it shoots into rhomboidal crystals, a figure frequently affected by the calcareous earth when it shoots into crystals: but when the aphronitrum is purer, it forms prismatic crystals. From these circumstances, M. Magellan thinks, that the aphronitrum is not only a triple but a multiple salt; as these pieces of old mortar, covered with this white frost, on ancient walls, are the very same from which the saltpetre-makers extract the mother water of nitre; after mixing with it the vegetable ashes to furnish the alkali.

2. Common salt with magnesia, or mineral alkali, contaminated by muriatic magnesia. This is a compound of common salt with magnesia, and is very deliquescent, owing to the compound of magnesia and spi-
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rit of salt; for neither mineral alkali nor pure sea-salt are at all deliquescent in the air.

3. Vitriolated magnesia with vitriol of iron, or Epfom salt contaminated with copperas. This, according to M. Monet, is found in some mineral waters.

4. Native alum contaminated with copperas. This is sometimes found in the aluminous schistus, and effloresces in a feathery form, and is perhaps the plumose alum of the ancients.

5. Native alum contaminated with sulphur. Dr Withering informs us, that this salt is met with about Wednegburg and Bellon, two places in Staffordshire, where the coal-pits are on fire. It sublimes to the surface, whence it may be collected in considerable quantity during dry or frosty weather. Our author, however, does not certainly affirm that this is a true chemical union, but the parts, he says, cannot be distinguished by the eye. It is kept in a deliquescent state by an access of vitriolic acid.

6. Native alum contaminated by vitriolated cobalt. This is found in some of the mines of Herregrund and Idria, where it shoots into long and slender filaments. M. Magellan supposes that this may be the *trichites* of the Greeks. On dissolving it in water, the presence of the vitriolic acid is discovered by adding a solution of terra ponderosa in muriatic acid; the phlogisticated alkali throws down a precipitate of cobalt, which forms a blue glass with cobalt or microcosmic salt.

7. Vitriol of copper with iron, the *vitriolum ferreo-cupreum cyaneum* of Linnæus. It is also called *Vitriol of Hungary*, because found in plenty in that country. Its colour is that of blue mixed with green; but sometimes the one shade prevails, and sometimes the other.

8. Vitriol of copper, iron, and zinc, is prepared in Sweden from the water pumped out of the copper mines at Dalame. The copper does not precipitate from a solution of this salt by rubbing it on iron, as is the case with the common blue vitriol. Large crystals of this salt are often found in the water, the copper mines from whence it is prepared.

9. Vitriol of copper and zinc. This is a quadruple salt, styled by Linnæus *Vitriolum ferreo-zinceo cupreum cyaneum*. Its colour is blue inclining to green; and it does not precipitate the copper by rubbing on iron, as the common blue vitriol does. It is called the blue vitriol of Goslar. Mongez makes a separate article of a compound salt mentioned by Wallerius, consisting also of a vitriolated copper with zinc, but whose crystals are of a fine red colour, found lately in the mines of Fahlun in Sweden. He adds, that the pale-blue colour of the former salt shows the predominancy of the copper, by which it is necessarily distinguished from the latter, where the vitriol is over-saturated. M. Magellan, however, is of opinion, that the red colour is owing to a proper quantity of iron in a dephlogisticated state, which has been overlooked in that compound. To this kind also Wallerius refers the yellowish vitriol found in Hungary.

10. Vitriol of iron and zinc; the green vitriol from Goslar in the Hartz; the *vitreolum zinceo-ferreum viride* of Linnæus. It is of a pale-green colour.

SALT-Mines. See SALT.

Rock-SALT. See SALT.

SALT-Water, or *Sea-water* (*Distillation of*). See *SEA-Water*.

Neutral SALTS. See *CHEMISTRY*, n° 172, 1180, and 1331.

SALT-Springs. Of these there are great numbers in different parts of the world, which undoubtedly have their origin from some of the large collections of fossil salt mentioned under the article *Common SALT*. See that article, and likewise *SPRING*.

SALTIER, one of the honourable ordinaries.—See *HERALDRY*, p. 452, and Plate CCXXX.

This, says G. Leigh, in his *Accedence of Arms*, p. 70, was anciently made of the height of a man, and driven full of pins, the use of which was to scale walls, &c. Upton says it was an instrument to catch wild beasts, whence he derives this word from *saltus*, i. e. “a forest.” The French call this ordinary *sautoir*, from *sauter* “to leap;” because it may have been used by soldiers to leap over walls of towns, which in former times were but low; but some modern authors think it is borne in imitation of St Andrew’s cross.

SALTING MEAT FOR THE USE OF THE NAVY. The following is the method recommended by the late admiral Sir Charles Knowles. When the ox is killed, let it be skinned and cut up into pieces fit for use as quick as possible, and salted while the meat is hot. For which purpose we must have a sufficient quantity of saltpetre and bay-salt pounded together and made hot in an oven, of each equal parts; with this sprinkle the meat at the rate of about two ounces to the pound; then lay the pieces on shelving boards to drain for 24 hours; which done, turn them and repeat the same operation, and let them lie for 24 hours longer. By this time the salt will be all melted, and have penetrated the meat, and the pieces be drained off; each piece must then be wiped dry with clean coarse cloths. A sufficient quantity of common salt must then be made hot likewise in an oven, and mixed when taken out with about one-third of brown sugar: then the casks being ready, rub each piece well with this mixture, and pack them well down, allowing about half a pound of the salt and sugar to each pound of meat, and it will keep good several years.

It is best to proportion the casks to the quantity used at one time, as the less it is exposed to the air the better. The same process does for pork, only a larger quantity of salt and less sugar must be used; but the preservation of both depends equally upon the meat being hot when first salted.

One pound of beef requires two ounces of saltpetre and two ounces of bay-salt, because it is to be sprinkled twice; an ounce of each to a pound of beef both times. The saltpetre requisite for 100 lb. of beef is 12½ lb. which at 12 d. per lb. is 12 s. 6 d.; and the same quantity of bay-salt (for 100 lb. of beef), at three half-pence per lb. is 1 s. 6 d.; of brown sugar and common salt mixed together half a pound is required, the former in the proportion of one-third, the latter of two-thirds, to a pound of beef. The brown sugar at 8 d. per pound. A hundred pounds of beef will take 250 ounces of it, which costs 10 s. 5 d. The quantity of common salt requisite for 100 lb. of beef is 533 ounces, which at 2 d. per lb. amounts to 5 s. 6 d. The expence therefore will stand thus.

Saltpetre,

Salt

Salting.

Salpetre,
Salzburg.

Saltpetre, 12 $\frac{1}{2}$ lb. for 100 lb. of beef, is	L. 0 12 6
Bay-salt, 12 $\frac{1}{2}$ lb. for do. is	0 1 6
Brown-sugar, 250 oz. for do. is	0 10 5
Beef, 100 lb. at 6d. per pound, is	2 10 0
Three casks for it at 1s. 6d each,	0 4 6
Labour, and heating the oven twice,	0 4 0
Common salt, 533 oz. for do. is	0 5 6

L 4 8 5

These articles are taken high; and if beef costs 6 d. per pound, meat cured thus will cost less than 1 s. per pound; and therefore comes much cheaper than live-stock in long sea-voyages.

SALTPETRE. See CHEMISTRY, n^o 740.

SALZBURG, an archbishopric of Germany, in the circle of Bavaria, bounded on the east by Stiria and the Upper Austria, on the west by the county of Tyrol, on the north by the duchy of Bavaria, and on the south by the duchy of Carinthia and the bishopric of Brixen. It is said to be about 100 miles from east to west, and upwards of 60 from north to south. With respect to the soil, it is very mountainous, yielding, however, excellent pasturage, and, in consequence of that, abounding in cattle, and horses remarkable for their mettle and hardiness. This country is particularly noted for the great quantities of salt it produces, and its strong passes and castles. Here are also considerable mines of gold, silver, copper, lead, iron, and lapis calaminaris, with quarries of marble, and a natural hot-bath. The principal rivers are the Salza, the Inn, the Ens, and Muer; which, as well as the lakes and other streams, are well-stored with fish. The peasants here are all allowed the use of arms, and trained to military duty. There are no nobles in the country, and most of the lands belong to the clergy. The states consist of the prelates, the cities, and towns. Notwithstanding this country is under the power of a Popish ecclesiastic, and the violent, arbitrary, and oppressive manner in which the Protestants have always been treated, great numbers of them still remained in it till the year 1732, when no less than 30,000 of them withdrew from it, dispersing themselves in the several Protestant states of Europe, and some of them were even sent from Great Britain to the American colonies. Besides brass and steel wares, and all sorts of arms and artillery, there are manufactures of coarse cloth and linen here. The archbishop has many and great prerogatives: he is a prince of the empire, and perpetual legate of the holy see in Germany, of which he is also primate. He has the first voice in the diet of this circle, and next to the electors in that of the empire, in the college of princes, in which he and the archduke of Austria preside by turns. No appeal lies from him either in civil or ecclesiastical causes, but to the pope alone; and he is intitled to wear the habit of a cardinal. He has also the nomination to several bishoprics; and the canonicates that fall vacant in the months in which the popes, by virtue of the concordat, are allowed to nominate, are all in his gift. His suffragans are the bishops of Freysingen, Ratisbon, Brixen, Gurk, Chiemsee, Seckau, and Lavant; and of these, the four last are nominated, and even confirmed by him, and not by the pope. At the diet of the empire, his envoy takes place of all the princes that are present, under the degree of an elector. His revenue is said to amount to near 200,000 l. a year, a great part

of it arising from the salt-works. He is able to raise 25,000 men; but keeps in constant pay, besides his guards, only one regiment, consisting of 1000 men. His court is very magnificent; and he has his hereditary great officers, and high colleges. The chapter consists of 24 canons, who must be all noble, but are obliged only to four months residence. At his accession to the see, the archbishop must pay 100,000 crowns to Rome for the pall. There is an order of knight-hood here, instituted in 1711, in honour of St Rupert, who was the first bishop of Salzburg about the beginning of the 8th century.

SALZBURG, the capital of a German archbishopric of the same name, and which takes its own from the river Salza, on which it stands, and over which it has a bridge. It is a very handsome place, well fortified, and the residence of the archbishop. The houses are high, and all built of stone: the roofs are in the Italian taste, and you may walk upon them. The castle here is very strong, and as strongly garrisoned, and well provided with provisions and warlike stores. The archbishop's palace is magnificent; and in the area before it is a fountain, esteemed the largest and grandest in Germany. The stables are very lofty; and the number of the horses usually kept by the archbishop is said to be upwards of 200. The city, of which one part stands on a steep rock, is well built, but the streets are narrow and badly paved. Besides the above-mentioned, there are two other stately palaces belonging to the archbishop, one of which is called the *Nuebau*, and the other *Mirabella*. The latter of these has a very beautiful garden; and the number of trees in the orangery is so great, that Mr Keyssler tells us, 20,000 oranges have been gathered from them in one year. The river Salza runs close by the walls of this garden. There are a great many other fine structures in the city, public and private, such as palaces, monasteries, hospitals, and churches. In the cathedral dedicated to St Rupert (the apostle of Bavaria, and a Scotchman by birth), all the altars are of marble of different kinds, and one of the organs has above 3200 pipes. The whole structure is extremely handsome. It is built of freestone in imitation of St Peter's at Rome. The portico is of marble, and the whole is covered with copper. Before the portico there is a large quadrangular place, with arches and galleries, in which is the prince's residence and there is a statue of Peter. In the middle of this place of an unnatural of the Virgin in bronze; it is fine, but of an unnatural size. There are large areas encompassed with handsome buildings on both sides of the church. In the middle of that which is to the left, there is a most magnificent fountain of marble, and some valuable figures of gigantic size. There is likewise a fountain in that to the right, but it is not to be compared with the former one, and the Neptune of it makes but a very pitiful figure. This town contains many more excellent buildings and statues, which remind one that the borders of Italy are not far distant. The winter and summer riding schools here are noble structures. The university was founded in 600, and committed to the care of the Benedictines. Besides it, there are two colleges, in which the young noblemen are educated. E Long. 33. c. N. Lat. 47. 55.

SALVADORA, in botany: A genus of the monogynia order, belonging to the tetrandria class of plants;

Salvage
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Salvia.

plants; and in the natural method ranking with those of which the order is doubtful. The calyx is quadrid; there is no corolla; the berry is monospermous; and the seed covered with an antlus or loose coat.

SALVAGE-MONEY, a reward allowed by the civil and statute law for the saving of ships or goods from the danger of the sea, pirates, or enemies.—Where any ship is in danger of being stranded, or driven on shore, justices of the peace are to command the constables to assemble as many persons as are necessary to preserve it; and, on its being preserved by their means, the persons assisting therein shall, in 30 days after, be paid a reasonable reward for their salvage; otherwise the ship or goods shall remain in the custody of the officers of the customs as a security for the same.

SALVATION, means the safety or preservation of any thing which is or has been in danger, and is generally used in a religious sense, when it means preservation from eternal death, or reception to the happiness of heaven, which is now offered to all men by the Christian religion upon certain conditions. The Hebrews but rarely make use of concrete terms as they are called, but often of abstracted. Thus, instead of saying that God saves them and protects them, they say that God is their salvation. Thus the word of salvation, the joy of salvation, the rock of salvation, the shield of salvation, the horn of salvation, &c. is as much as to say, The word that declares deliverance; the joy that attends the escaping a great danger, a rock where any one takes refuge, and where he may be in safety from his enemy; a buckler, that secures him from the arm of the enemy; a horn or ray of light, of happiness and salvation, &c. See **THEOLOGY**, &c.

SALVATOR ROSA. See **ROSA**.

SALVE REGINA, among the Romanists, the name of a Latin prayer, addressed to the Virgin, and sung after complines, as also upon the point of executing a criminal. Durandus says, it was composed by Peter bishop of Compostella. The custom of singing the *salve regina* at the close of the office was begun by order of St Dominic, and first in the congregation of Dominicans at Bologna, about 1237. Gregory IX. first appointed it to be general. St Bernard added the conclusion, *O dulcis! O pia*, &c.

SALVIA, SAGE: A genus of the monogynia order, belonging to the digynia class of plants; and in the natural method ranking under the 42d order, *Verticillatæ*. The corolla is unequal; and the filaments placed crosswise on a pedicle. The most remarkable species are,

1. The officinalis, or common large sage, which is cultivated in gardens, of which there are the following varieties: 1. The common green sage. 2. The wormwood sage. 3. The green sage, with a variegated leaf. 4. The red sage. 5. The red sage with a variegated leaf. These are accidental variations, and therefore are not enumerated as species. The common sage grows naturally in the southern parts of Europe, but is here cultivated in gardens for use; but that variety with red or blackish leaves is the most common in the British gardens; and the wormwood sage is in greater plenty here than the common green-leaved sage, which is but in few gardens.

2. The tomentosa, generally titled *balsamic sage* by the gardeners. The stalks of this do not grow so upright as those of the common sage; they are very hairy,

and divide into several branches, which are garnished with broad heart-shaped woolly leaves standing upon long foot-stalks; they are sawed on their edges, and their upper surfaces are rough: the leaves, which are upon the flower-stalks, are oblong and oval, standing upon shorter foot stalks, and are very slightly sawed on their edges; they grow in whorled spikes toward the top of the branches; the whorls are pretty far distant, but few flowers in each; they are of a pale blue, about the size of those of the common sort. This sage is preferred to all the others for making tea.

3. The auriculata, common sage of virtue, which is also well known in the gardens and markets. The leaves of this is narrower than those of the common sort; they are hoary, and some of them are indented on their edges towards the base, which indentures have the appearance of ears. The spikes of flowers are longer than those of the two former sorts, and the whorls are generally naked, having no leaves between them. The flowers are smaller, and of a deeper blue than those of common red sage.

4. The pomifera, with spear-shaped oval entire leaves, grow naturally in Crete. This hath a shrubby stalk, which rises four or five feet high, dividing into several branches. The flowers grow in spikes at the end of the branches; they are of a pale blue colour, and have obtuse empalements. The branches of this sage have often punctures made in them by insects, at which places grow large protuberances as big as apples, in the same manner as the galls upon an oak, and the rough balls on the briar.

All the sorts of sage may be propagated by seeds, if they can be procured; but, as some of them do not perfect their seeds in this country, and most of the sorts, but especially the common kinds for use, are easily propagated by slips, it is not worth while to raise them from seeds.

SALVIANUS, an ancient father of the Christian church, who flourished in the 5th century, and was well skilled in the sciences. It is said he lived in continence with his wife Palladia, as if she had been his sister; and that he was so afflicted at the wickedness of that age, that he was called the *Jeremiah of the fifth century*. He acquired such reputation for his piety and learning, that he was named the *master of the bishops*. He wrote a Treatise on Providence; another on Avarice; and some epistles, of which Baluze has given an excellent edition; that of Conrad Rittershusius, in 2 vols octavo, is also esteemed.

SALUTATION, the act of saluting, greeting, or paying respect and reverence to any one.

When men (writes the compiler of *L'Esprit des Curiosités of Usages et des Coutumes*) salute each other in an amicable manner, it signifies little whether they move a particular part of the body, or practise a particular ceremony. In these actions there must exist different customs. Every nation imagines it employs the most reasonable ones; but all are equally simple, and none are to be treated as ridiculous. This infinite number of ceremonies may be reduced to two kinds; to reverences or salutations; and to the touch of some part of the human body. To bend and prostrate one's self to express sentiments of respect, appears to be a natural motion; for terrified persons throw themselves on the earth when they adore invisible beings. The affectionate touch of the

Salvia
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Salutation.

Salutation. the person they salute, is an expression of tenderness. As nations decline from their ancient simplicity, much farce and grimace are introduced. Superstition, the manners of a people, and their situation, influence the modes of salutation; as may be observed from the instances we collect.

Modes of salutation have sometimes very different characters, and it is no uninteresting speculation to examine their shades. Many display a refinement of delicacy, while others are remarkable for their simplicity, or for their sensibility. In general, however, they are frequently the same in the infancy of nations, and in more polished societies. Respect, humility, fear, and esteem, are expressed much in a similar manner; for these are the natural consequences of the organization of the body. These demonstrations become, in time, only empty civilities, which signify nothing; we shall notice what they were originally, without reflecting on what they are.

The first nations have no peculiar modes of salutation; they know no reverences, or other compliments, or they despise and disdain them. The Greenlanders laugh when they see an European uncover his head and bend his body before him whom he calls his superior. The islanders, near the Philippines, take the hand or foot of him they salute, and with it they gently rub their face. The Laplanders apply their nose strongly against that of the person they salute. Dampier says, that at New Guinea they are satisfied in placing on their heads the leaves of trees, which have ever passed for symbols of friendship and peace. This is at least a picturesque salute.

Other salutations are very inconvenient and painful; it requires great practice to enable a man to be polite in an island situated in the Straits of the Sound. Houtman tells us, they saluted him in this odd way: "They raised his left foot, which they passed gently over the right leg, and from thence over his face." The inhabitants of the Philippines bend their body very low, in placing their hands on their cheeks, and raising at the same time one foot in the air, with their knee bent. An Ethiopian takes the robe of another, and ties it about his own waist, so that he leaves his friend half naked. This custom of undressing on these occasions takes other forms; sometimes men place themselves naked before the person whom they salute; it is to show their humility, and that they are unworthy of appearing in his presence. This was practised before Sir Joseph Banks, when he received the visit of two female Otahitians. Their innocent simplicity, no doubt, did not appear immodest in the eyes of the *virtuoso*. Sometimes they only undress partially. The Japanese only take off a slipper; the people of Arracan, their sandals in the street, and their stockings in the house.

In the progress of time, it appears servile to uncover one's self. The grandees of Spain claim the right of appearing covered before the king, to show that they are not so much subjected to him as the rest of the nation; and (this writer observes) we may remark, that the English do not uncover their heads so much as the other nations of Europe. In a word, there is not a nation (observes the humorous Montaigne), even to the people who, when they salute, turn their backs on their friends, but that can be justified in their customs. It must be observed of the negroes, that they are lovers of

Salutation. ludicrous actions, and thus make all their ceremonies farcical. The greater part pull the fingers till they crack. Snelgrave gives an odd representation of the embassy which the king of Dahomy sent to him. The ceremonies of salutation consisted in the most ridiculous contortions. When two negro monarchs visit, they embrace in snapping three times the middle finger.

Barbarous nations frequently imprint on their salutations the dispositions of their character. When the inhabitants of Carmana (says Athenæus) would show a peculiar mark of esteem, they breathed a vein, and presented for the beverage of their friend the blood as it issued. The Franks tore hair from their head, and presented it to the person they saluted. The slave cut his hair, and offered it to his master. The Chinese are singularly affected in their personal civilities: they even calculate the number of their reverences. These are their most remarkable postures. The men move their hands in an affectionate manner, while they are joined together on the breast, and bow their head a little. If they respect a person, they raise their hands joined, and then lower them to the earth in bending the body. If two persons meet after a long separation, they both fall on their knees, and bend the face to the earth, and this ceremony they repeat two or three times. Surely we may differ here with the sentiment of Montaigne, and confess this ceremony to be ridiculous. It arises from their national affectation. They substitute artificial ceremonies for natural actions. Their expressions mean as little as their ceremonies. If a Chinese is asked how he finds himself in health? he answers, *Very well: thanks to your abundant felicity*. If they would tell a man that he looks well, they say, *Prosperity is painted on your face*; or, *Your air announces your happiness*. If you render them any service, they say, *My thanks should be immortal*. If you praise them, they answer, *How shall I dare to persuade myself of what you say of me?* If you dine with them, they tell you at parting, *We have not treated you with sufficient distinction*. The various titles they invent for each other it would be impossible to translate.

It is to be observed, that all these answers are prescribed by the Chinese ritual, or academy of compliments. There are determined the number of bows; the expressions to be employed; the genuflections; and the inclinations which are to be made to the right or left hand: the salutations of the master before the chair where the stranger is to be seated, for he salutes it most profoundly, and wipes the dust away with the skirts of his robe; all these and other things are noticed, even to the silent gestures, by which you are entreated to enter the house. The lower class of people are equally nice in these punctilios; and ambassadors pass 40 days in practising them before they are enabled to appear at court. A tribunal of ceremonies has been erected, and every day very odd decrees are issued, to which the Chinese most religiously submit.

The marks of honour are frequently arbitrary; to be seated, with us, is a mark of repose and familiarity; to stand up, that of respect. There are countries, however, in which princes will only be addressed by persons who are seated, and it is considered as a favour to be permitted to stand in their presence. This custom prevails in despotic countries: a despot cannot suffer without disgust the elevated figure of his subjects; he is pleased

Salute.

pleased to bend their bodies with their genius: his presence must lay those who behold him prostrate on the earth: he desires no eagerness, no attention; he would only inspire terror.

The pope makes no reverence to any mortal except the emperor, to whom he stoops a very little when he permits him to kiss his lips.

SALUTE, in military matters, a discharge of artillery, or small arms, or both, in honour of some person of extraordinary quality. The *colours* likewise salute royal persons, and generals commanding in chief; which is done by lowering the point to the ground. In the field, when a regiment is to be reviewed by the king or his general, the drums beat a march as he passes along the line, and the officers salute one after another, bowing their half-pikes or swords to the ground; then recover and take off their hats. The ensigns salute all together, by lowering their colours.

SALUTE, in the navy, a testimony of deference or homage rendered by the ships of one nation to another, or by ships of the same nation to a superior or equal.

This ceremony is variously performed, according to the circumstances, rank, or situation, of the parties. It consists in firing a certain number of cannon, or volleys of small arms; in striking the colours or top-sails; or in one or more general shouts of the whole ship's crew, mounted on the masts or rigging for that purpose.

The principal regulations with regard to salutes in the royal navy are as follow:

"When a flag-officer salutes the admiral and commander in chief of the fleet, he is to give him fifteen guns; but when captains salute him, they are to give him seventeen guns. The admiral and commander in chief of the fleet is to return two guns less to flag-officers, and four less to captains. Flag-officers saluting their superior or senior officer, are to give him thirteen guns. Flag-officers are to return an equal number of guns to flag-officers bearing their flags on the same mast, and two guns less to the rest, as also to captains.

"When a captain salutes an admiral of the white or blue, he is to give him fifteen guns; but to vice and rear admirals, thirteen guns. When a flag-officer is saluted by two or more of his majesty's ships, he is not to return the salute till all have finished, and then to do it with such a reasonable number of guns as he shall judge proper.

"In case of the meeting of two squadrons, the two chiefs only are to exchange salutes. And if single ships meet a squadron consisting of more than one flag, the principal flag only is to be saluted. No salutes shall be repeated by the same ships, unless there has been a separation of six months at least.

"None of his majesty's ships of war, commanded only by captains, shall give or receive salutes from one another, in whatsoever part of the world they meet.

"A flag officer commanding in chief shall be saluted, upon his first hoisting his flag, by all the ships present, with such a number of guns as is allowed by the first, third, or fifth articles.

"When any of his majesty's ships shall meet with any ship or ships belonging to any foreign prince or state, within his majesty's seas (which extend to Cape Finisterre), it is expected, that the said foreign ships do

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strike their top-sail, and take in their flag, in acknowledgement of his majesty's sovereignty in those seas: and if any shall refuse or offer to resist, it is enjoined to all flag-officers and commanders to use their utmost endeavours to compel them thereto, and not suffer any dishonour to be done to his majesty. And if any of his majesty's subjects shall so much forget their duty, as to omit striking their top-sail in passing by his majesty's ships, the name of the ship and master, and from whence, and whither bound, together with affidavits of the fact, are to be sent up to the secretary of the admiralty, in order to their being proceeded against in the admiralty court. And it is to be observed, that in his majesty's seas, his majesty's ships are in nowise to strike to any; and that in other parts, no ship of his majesty's is to strike her flag or top-sail to any foreigner, unless such foreign ship shall have first struck, or at the same time strike, her flag or top-sail to his majesty's ship.

"The flag-officers and commanders of his majesty's ships are to be careful to maintain his majesty's honour upon all occasions, giving protection to his subjects, and endeavouring, what in them lies, to secure and encourage them in their lawful commerce; and they are not to injure, in any manner, the subjects of his majesty's friends and allies.

"If a foreign admiral meets with any of his majesty's ships, and salutes them, he shall receive gun for gun. If he be a vice-admiral, the admiral shall answer with two guns less. If a rear-admiral, the admiral and vice-admiral shall return two less. But if the ship be commanded by a captain only, the flag-officer shall give two guns less, and captains an equal number.

"When any of his majesty's ships come to an anchor in a foreign port or road, within cannon-shot of its forts, the captain may salute the place with such a number of guns as have been customary, upon good assurance of having the like number returned, but not otherwise. But if the ship bears a flag, the flag-officer shall first carefully inform himself how flags of like rank, belonging to other crowned heads, have given or returned salutes, and to insist upon the same terms of respect.

"It is allowed to the commanders of his majesty's ships in foreign parts, to salute the persons of any admirals, commanders in chief, or captains of ships of war of foreign nations, and foreign noblemen, or strangers of quality, as also the factories of the king's subjects, coming on board to visit the ship; and the number of guns is left to the commander, as shall be suitable to the occasion and the quality of the persons visiting; but he is nevertheless to remain accountable for any excesses in the abuse of this liberty. If the ship visited be in company with other ships of war, the captain is not to make use of the civilities allowed in the preceding articles but with leave and consent of the commander in chief or the senior captain.

"Merchant-ships, whether foreigners or belonging to his majesty's subjects, saluting the admiral of the fleet, shall be answered by six guns less; when they salute any other flag-ships, they shall be answered by four guns less; and if they salute men of war commanded by captains, they shall be answered by two guns less. If several merchant-ships salute in company, no return is to be made till all have finished, and then by

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Salute.

Saluzzo
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Samanians.

such a number of guns as shall be thought proper; but though the merchant-ships should answer, there shall be no second return.

"None of his majesty's ships of war shall salute any of his majesty's forts or castles in Great Britain or Ireland, on any pretence whatsoever."

SALUZZO, called by the French *Saluces*, a town and castle of Italy, in Piedmont, and capital of a marquisate of the same name, with a bishop's see. It is situated on an eminence at the foot of the Alps near the river Po, in E. Long. 18. 27. N. Lat. 44. 35. It is subject to the king of Sardinia.

SALUZZO, the marquisate of, a province of Piedmont in Italy, bounded on the north by Dauphiny and the province of the Four Valleys, on the east by those of Savigliano and Fossano, on the south by that of Cona and the county of Nice, and on the west by Barcelonetta. It was ceded to the duke of Savoy in 1601.

SAMA, a town and fort in the hands of the Dutch on the Gold Coast of Africa, stands on an eminence, the fort being watered by the pleasant river of St George, that discharges itself into the sea. The town contains above 200 houses, which seem to form three distinct villages, one of which is immediately under the cannon of the Dutch fort St Sebastian. Des Marchais deems this town to be one of the largest on the whole coast, Barbot likewise agreeing with him in its situation, extent, and number of inhabitants. The sole employment of the natives is fishing; a circumstance which easily accounts for their poverty. The government of this place is republican, the magistrates having the supreme power, being subject to periodical changes, and under the authority of the king of Gavi, who seldom however interferes in the affairs of the state. This prince resides some leagues distant from the sea, is rich, and much respected by his neighbours.

SAMANEANS, in antiquity, a kind of magi or philosophers, have been confounded by some with the Bramins. They proceeded from Ariana, a province of Persia, and the neighbouring countries, spread themselves in India, and taught new doctrines.

The Bramins, before their arrival, it is said, were in the highest period of their glory, were the only oracles of India, and their principal residence was on the banks of the Ganges, and in the adjacent mountains; while the Samaneans were settled towards the Indus. Others say, that the Bramins acquired all their knowledge from the Samaneans, before whose arrival it would be difficult to prove that the Bramins were the religious teachers of the Indians. The most celebrated and ancient of the Samanean doctors was Boutta, or Budda, who was born 683 years before Christ. His scholars paid him divine honours; and his doctrine, which consisted chiefly in the transmigration of souls, and in the worship of cows, was adopted not only in India, but also in Japan, China, Siam, and Tartary. It was propagated, according to M. de Sainte Croix, in Thibet, in the 8th century, and succeeded there the ancient religion of Zamolxis. The Samaneans, or Buddists, were entirely destroyed in India by the jealous rage of the Bramins, whose absurd practices and fables they affected to treat with contempt; but several of their books are still preserved and respected on the coasts of Malabar.

We are told, too, that several of the Bramin orders have adopted their manner of living, and openly profess the greatest part of their doctrines. *L'Ezour Vedam, ou Ancien Comment du Vedam*, published by M. de S. Croix, Paris 1779. See **BRAMINS**.

SAMAR, a Spanish island not far from Manilla in the East Indies, is called *Samar* on the side which looks towards the other isles, and *Ibabao* on that next the ocean. It is like the trunk of a man's body, without head or legs. Its greatest length, from Cape Baliquaton, which, with the point of Manilla, makes the strait of St Bernardino, in 13 degrees 30 minutes north latitude, extends to that of Guignan in 11 degrees towards the south. The other two points, making the greatest breadth of the island, are Cabo de Spirito Santo, or *Cape of the Holy Ghost*, the high mountains of which are the first discovered by ships from New Spain; and that which lying opposite to Leyte westward, makes another strait, scarce a stone's throw over. The whole compass of the island is about 130 leagues. Between Guignan and Cape Spirito Santo is the port of Borognon, and not far from thence those of Palapa and Catubig, and the little island of Bin, and the coast of Catarman. Vessels from countries not yet discovered are very frequently cast away on the before-mentioned coast of Palapa. Within the straits of St Bernardino, and beyond Baliquaton, is the coast of Samar, on which are the villages of Ibatan, Bangahon, Cathalogan, Paranos, and Calviga. Then follows the strait of St Juanillo, without which, standing eastward, appears the point and little island of Guignan, where the compass of the island ends. It is mountainous and craggy, but fruitful in the few plains there are. The fruits there are much the same as that of **LEYTE**; but there is one particular fort, called by the Spaniards *chicoy*, and by the Chinese, who put a great value on it, *seyzu*, without kernels.

SAMARA, in botany; a genus of the monogynia order, belonging to the tetrandria class of plants. The calyx is quadripartite, the corolla tetrapetalous; the stamina immersed in the base of the petal; the stigma funnel-shaped.

SAMARCAND, or **SARMACAND**, an ancient and famous town of Asia, capital of the kingdom of the same name in the country of the Usbeck Tartars, with a castle and a famous university. The houses are built with stones, and it carries on a trade in excellent fruits. It is pleasantly seated near the river Sogde, a branch of the Amu, E. Long. 69. 0. N. Lat. 39. 50. This town was the capital of the kingdom of Sogdia in the time of Alexander the Great, when it was called *Maracanda*. It was afterwards the capital of the empire of Tamerlane the Great. In the time of Jenghiz Khan, it was forced to yield to the arms of that cruel conqueror; by whom the garrison, amounting to 30,000 men, were butchered; 30,000 of the inhabitants, with their wives and children, were presented to his generals; the rest were permitted to live in the city, on paying a tribute of 300,000 dinars or crowns of gold.

SAMARIA (anc. geog.), one of the three larger Cisjordan districts, situated in the middle between Galilee to the north and Judea to the south, beginning at the village Ginæa, in the Campus Magnus, and ending at the toparchy called *Acrobatena* (Josephus). Its soil

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Samaria.

Modern
Univ. Hist.
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p. 157.

Samaria. Soil differing in nothing from that of Judæa; both equally hilly and champaign, both equally fertile in corn and fruit (id.) Called the *kingdom of Samaria in Ephraim* (Bible); comprising the ten tribes, and consequently all the country to the north of Judea and east and west of Jordan.

SAMARIA, the capital city of the kingdom of Samaria, or of the ten tribes. It was built by Omri king of Israel, who began to reign in the year of the world 3079, and died 3086 (1 Kings xvi. 24.) He bought the hill Samaria of Shemer for two talents of silver, or for the sum of L. 684: 7: 6. It took the name of *Samaria* from Shemer the owner of the hill; though some think there were already some beginnings of a city, because, before the reign of Omri, there is mention made of Samaria (1 Kings xiii. 32.) in the year of the world 3030. But others take this for a prolepsis, or an anticipation, in the discourse of the man of God, who speaks of Samaria under the reign of Jeroboam.

However this be, it is certain that Samaria was no considerable place, and did not become the capital city of the kingdom of Israel till after the reign of Omri. Before him, the kings of Israel dwelt at Shechem, or at Tirzah. Samaria was situated upon an agreeable and fruitful hill, and an advantageous situation, and was 12 miles from Dothaim, 12 from Merrom, and four from Atharoth. Josephus says, it was a day's journey from Jerusalem. Besides, though it was built upon an eminence, yet it must have water in abundance; since we find medals struck in this city, whereon is represented the goddess Astarte treading a river under foot; which proves it to have been well watered. And Josephus observes, that when it was taken by John Hircanus the prince of the Jews, he entirely demolished it, and caused even the brook to flow over its ruins, to obliterate all the footsteps of it.

The kings of Samaria omitted nothing to make this city the strongest, the finest, and the richest, that was possible. Ahab built there a palace of ivory (1 Kings xxii. 39.), that is, in which there were many ornaments of ivory. Amos describes Samaria under Jeroboam II. as a city sunk into all excesses of luxury and effeminacy (Amos iii. 15. and iv. 1, 2).

Ben-hadad king of Syria built public places or streets in Samaria (1 Kings xx. 34.) probably for traffic, where his people dwelt to promote trade. His son Ben-hadad besieged this place under the reign of Ahab (1 Kings xx. 1, 2, 3, &c.) in the year of the world 3103.

The following year, Ben-hadad brought an army into the field, probably with a design to march against Samaria: but his army was again cut in pieces. Some years after this, Ben-hadad came a third time, lay down before Samaria, and reduced it to such necessities by famine, that a mother was there forced to eat her own child; but the city was relieved by a sensible effect of the protection of God.

Lastly, it was besieged by Shalmaneser king of Assyria, in the ninth year of Hoshea king of Israel (2 Kings xvii. 6, 7, &c.), which was the fourth of Hezekiah king of Judah. It was taken three years after, in the year of the world 3283. The prophet Hosea speaks of the cruelties exercised by Shalmaneser against the besieged (Hos. x. 4, 8, 9. xiv. 1.); and Micah says, that this

city was reduced to a heap of stones (Mic. i. 6). The Cuthites that were sent by Esar-haddon to inhabit the country of Samaria, did not think it worth their while to repair the ruins of this city; they dwelt at Shechem, which they made the capital city of their state. They were still upon this footing when Alexander the Great came into Phœnicia and Judea. However, the Cuthites had rebuilt some of the houses of Samaria, even from the time of the return from the captivity, since Ezra then speaks of the inhabitants of Samaria (Ezra iv. 17. Nehem. iv. 2.); and that the Samaritans, being jealous of the favours that Alexander the Great had conferred on the Jews, revolted from him while this prince was in Egypt, and burnt Andromachus alive, whom Alexander had left governor of Syria. Alexander marched against them, took Samaria, and put in Macedonians to inhabit it; giving the country round it to the Jews; and to encourage them to cultivate it, he granted them an exemption from tribute. The king of Egypt and Syria, who succeeded Alexander, deprived them of the property of this country.

But Alexander Balas king of Syria restored to Jonathan Maccabæus the cities of Lydda, Ephrem, and Ramatha, which he cut off from the country of Samaria (1 Mac. x. 30, 38, and xi. 28, 34.) Lastly, the Jews re-entered into the full possession of this whole country under John Hircanus the Asmonæan, who took Samaria, and ruined it in such a manner, according to Josephus, that he made the river run through its ruins. It continued in this condition to the year of the world 3947, when Aulus Gabinius, the proconsul of Syria, rebuilt it, and gave it the name of Gabiniana. But it was yet but very inconsiderable, till Herod the Great restored it to its ancient lustre, and gave it the Greek name of Sebaste, which in Latin is Augusta, in honour of the emperor Augustus, who had given him the property of this place.

The sacred authors of the New Testament speak but little of Samaria; and when they do mention it, it is rather in respect of the country about it, than of the city itself. (See Luke xvii. 11. John iv. 4, 5.)—It was there our Lord had the conversation with the woman of Samaria, that is, with a Samaritan woman of the city of Sychar. After the death of St Stephen, (Acts viii. 1, 2, 3.), when the disciples were dispersed through the cities of Judea and Samaria, St Philip the deacon withdrew into the city of Samaria, where he made several converts. When the apostles heard that this city had received the word of God, they sent Peter and John thither, to communicate the Holy Ghost to such as had been baptized. It was there they found Simon Magus, who offered money to the apostles, being in hopes to buy this power of communicating the Holy Ghost. Samaria is never called Sebaste in the books of the New Testament, though strangers hardly knew it but by this name. St Jerome says, that it was thought Obadiah was buried at Samaria. They also shewed there the tombs of Elisha and of St John the Baptist. There are found many ancient medals that were struck at Sebaste, or Samaria, and some bishops of this city have subscribed to the ancient councils.

SAMARITANS. We have already spoken of the Samaritans under the article CUTH. The Samaritans

Samaritans are the people of the city of Samaria, and the inhabitants of the province of which Samaria was the capital city. In this sense, it should seem that we might give the name of Samaritans to the Israelites of the ten tribes, who lived in the city and territory of Samaria. However, the sacred authors commonly give the name of Samaritans only to those strange people whom the kings of Assyria sent from beyond the Euphrates to inhabit the kingdom of Samaria, when they took away captive the Israelites that were there before. Thus we may fix the epoch of the Samaritans at the taking of Samaria by Salmaneser, in the year of the world 3283. This prince carried away captive the Israelites that he found in the country, and assigned them dwellings beyond the Euphrates, and in Assyria, (2 Kings xvii. 24.) He sent other inhabitants in their stead, of which the most considerable were the Cuthites, a people descended from Cush, and who are probably of the number of those whom the ancients knew by the name of Scythians.

After Salmaneser, his successor Esar-haddon was informed, that the people which had been sent to Samaria were infested by lions that devoured them, (2 Kings xvii. 25.); this he imputed to the ignorance of the people in the manner of worshipping the god of the country. Wherefore Esar-haddon sent a priest of the God of Israel that he might teach them the religion of the Hebrews. But they thought they might blend this religion with that which they professed before; so they continued to worship their idols as before, in conjunction with the God of Israel, not perceiving how absurd and incompatible these two religions were.

It is not known how long they continued in this state; but at the return from the captivity of Babylon, it appears they had entirely quitted the worship of their idols; and when they asked permission of the Israelites that they might labour with them at the rebuilding of the temple of Jerusalem, they affirmed, that from the time that Esar-haddon had brought them into this country they had always worshipped the Lord, (Ezrah iv. 1, 2, 3.) And indeed, after the return from the captivity, the scripture does not any where reproach them with idolatrous worship, though it does not dissemble either their jealousy against the Jews, nor the ill offices they had done them at the court of Persia, by their slanders and calumnies, or the stratagems they contrived to hinder the repairing of the walls of Jerusalem.—(Nehem. ii. 10, 19. iv. 2, &c. vi. 1, 2, &c.)

It does not appear that there was any temple in Samaria, in common to all these people who came thither from beyond the Euphrates, before the coming of Alexander the Great into Judea. Before that time, every one was left to his own discretion, and worshipped the Lord where he thought fit. But they presently comprehended, from the books of Moses which they had in their hands, and from the example of the Jews their neighbours, that God was to be worshipped in that place only which he had chosen. So that since they could not go to the temple of Jerusalem, which the Jews would not allow of, they bethought themselves of building a temple of their own upon mount Gerizim, near the city of Shechem, which was then their capital. Therefore Sanballat, the governor of the Samaritans, applied himself to Alexander, and told him he had a son-in-law, called Manasses, son to Jaddus

the high-priest of the Jews, who had retired to Samaria with a great number of other persons of his own nation; that he desired to build a temple in this province, where he might exercise the high-priesthood; that this undertaking would be to the advantage of the king's affairs, because in building a temple in the province of Samaria, the nation of the Jews would be divided, who are a turbulent and seditious people, and by such a division would be made weaker, and less in a condition to undertake new enterprises.

Alexander readily consented to what Sanballat desired, and the Samaritans presently began their building of the temple of Gerizim, which from that time they have always frequented, and still frequent to this day, as the place where the Lord intended to receive the adoration of his people. It is of this mountain, and of this temple, that the Samaritan woman of Sychar spoke to our Saviour, (John iv. 20.) See GARIZIM.

The Samaritans did not long continue under the obedience of Alexander. They revolted from him the very next year, and Alexander drove them out of Samaria, put Macedonians in their room, and gave the province of Samaria to the Jews. This preference that Alexander gave to the Israelites contributed not a little to increase that hatred and animosity that had already obtained between these two people. When any Israelite had deserved punishment for the violation of some important point of the law, he presently took refuge in Samaria or Shechem, and embraced the way of worship according to the temple of Garizim. When the Jews were in a prosperous condition, and affairs were favourable to them, the Samaritans did not fail to call themselves Hebrews, and pretended to be of the race of Abraham. But no sooner were the Jews fallen into discredit or persecution, but the Samaritans immediately disowned them, would have nothing in common with them, acknowledged themselves to be Phœnicians originally, or that they were descended from Joseph and Manasseh his son. This used to be their practice in the time of Antiochus Epiphanes.

The Samaritans, having received the Pentateuch, or the five books of Moses, from the priest that was sent by Esar-haddon, have preserved it to this day, in the same language and character it was then, that is, in the old Hebrew or Phœnician character, which we now call the Samaritan, to distinguish it from the modern Hebrew character, which at present we find in the books of the Jews. These last, after their captivity, changed their old characters, and took up those of the Chaldee, which they had been used to at Babylon, and which they continue still to use. It is wrong, says F. Calmet, to give this the name of the Hebrew character, for that can be said properly only of the Samaritan text. The critics have taken notice of some variations between the Pentateuch of the Jews and that of the Samaritans; but these varieties of reading chiefly regard the word Gerizim, which the Samaritans seem to have purposely introduced to favour their pretensions, that mount Gerizim was the place in which the Lord was to be adored. The other various readings are of small importance.

The religion of this people was at first the Pagan. Every one worshipped the deity they had been used to in their own country (2 Kings xvii. 25, 30, 31.)

The

Samaritans. The Babylonians worshipped Succoth-benoth; the Cuthites, Nergal; the Hamathites, Ashima; the Avites, Nibhaz and Tartak; the Sepharvites, Adrammelech and Anammelech. If we would enumerate all the names of false gods to whom the Samaritans have paid a sacrilegious worship, we should have enough to do. This matter is sufficiently perplexed, by reason of the different names by which they were adored by different nations, insomuch that it would be almost impossible to clear up this affair. See **SUCCOTH-BENOTH**, &c. Afterwards, to this profane worship the Samaritans added that of the Lord, the God of Israel, (2 Kings xvii. 29, 30, 31, 32.) They gave a proof of their little regard to this worship of the true God, when under Antiochus Epiphanes they consecrated their temple at Gerizim to Jupiter Argivus. In the time of Alexander the Great, they celebrated the sabbatical year, and consequently the year of jubilee also. We do not know whether they did it exactly at the same time with the Jews, or whether they observed any other epoch; and it is to little purpose that some critics have attempted to ascertain the first beginning of it. Under the kings of Syria they followed the epoch of the Greeks, or that of the Seleucids, as other people did that were under the government of the Seleucids. After that Herod had re-established Samaria, and had given it the name of Sebaste, the inhabitants of this city, in their medals, and all public acts, took the date of this new establishment. But the inhabitants of Samaria, of which the greater part were Pagans or Jews, were no rule to the other Samaritans, who probably reckoned their years according to the reigns of the emperors they were subject to, till the time they fell under the jurisdiction of the Mahometans, under which they live at this day; and they reckon their year by the Hegira, or, as they speak, according to the reign of Ishmael, or the Ishmaelites. Such of our readers as desire to be further acquainted with the history of the ancient Samaritans, we refer to the works of Josephus, where they will find that subject largely treated of.

As to their belief, it is objected to them, that they receive only the Pentateuch, and reject all the other books of scripture, chiefly the prophets, who have more expressly declared the coming of the Messiah.—They have also been accused of believing God to be corporeal, of denying the Holy Ghost, and the resurrection of the dead. Jesus Christ reproaches them (John iv. 22.) with worshipping they know not what; and in the place already referred to he seems to exclude them from salvation, when he says, that “Salvation is of the Jews.” True it is, that these words might only signify, that the Messiah was to proceed from the Jews; but the crime of schism alone, and a separation from the true church, was sufficient to exclude them from salvation. The Samaritan woman is a sufficient testimony that the Samaritans expected a Messiah, who they hoped would clear up all their doubts (John iv. 25.) Several of the inhabitants of Shechem believed at the preaching of Jesus Christ, and several of Samaria believed at that of St. Philip; but it is said, they soon fell back to their former errors, being perverted by Simon Magus.

The Samaritans at present are very few in number. Joseph Scaliger, being curious to know their usages,

wrote to the Samaritans of Egypt, and to the high-priest of the whole sect who resided at Neapolis in Syria. They returned two answers to Scaliger, dated in the year of the Hegira 998. These were preserved in the French king's library, and were translated into Latin by father Morin, and printed in England in the collection of that father's letters, in 1682, under the title of *Antiquitates Ecclesie Orientalis*. By these letters it appears, that they believe in God, in his servant Moses, the holy law, the mountain Gerizim, the house of God, the day of vengeance and of peace; that they value themselves upon observing the law of Moses in many points more rigidly than the Jews themselves.—They keep the sabbath with the utmost strictness, required by the law, without stirring from the place they are in, but only to the synagogue. They go not out of the city, and abstain from their wives on that day. They never delay circumcision beyond the eighth day. They still sacrifice to this day in the temple on mount Gerizim, and give to the priest what is enjoined by the law. They do not marry their own nieces, as the Jews do, nor do they allow themselves a plurality of wives. Their hatred for the Jews may be seen through all the history of Josephus, and in several places of the New Testament. The Jewish historian informs us, that under the government of Coponius, one passover night, when they opened the gates of the temple, some Samaritans had scattered the bones of dead men there, to insult the Jews, and to interrupt the devotion of the festival. The evangelists shew us, that the Jews and Samaritans held no correspondence together (John iv. 9.) “The Jews have no dealings with the Samaritans.” And the Samaritan woman of Sychar was much surprised that Jesus talked with her, and asked drink of her, being a Samaritan. When our Saviour sent his apostles to preach in Judea, he forbade them to enter into the Samaritan cities, (Matt. x. 5.); because he looked upon them as schismatics, and as strangers to the covenant of Israel. One day when he sent his disciples to provide him a lodging in one of the cities of the Samaritans, they would not entertain him, because they perceived he was going to Jerusalem. (Luke ix. 52, 53.) “Because his face was as though he would go to Jerusalem.” And when the Jews were provoked at the reproaches of Jesus Christ, they told him he was a Samaritan (John viii. 48.), thinking they could say nothing more severe against him. Josephus relates, that some Samaritans having killed several Jews as they were going to the feast at Jerusalem, this occasioned a kind of a war between them. The Samaritans continued their fealty to the Romans, when the Jews revolted from them; yet they did not escape from being involved in some of the calamities of their neighbours.

There are still at this day some Samaritans at Shechem, otherwise called Naplouse. They have priests there, who say they are of the family of Aaron. They have a high-priest, who resides at Shechem, or at Gerizim, who offers sacrifices there, and who declares the feast of the passover, and all the other feasts, to all the dispersed Samaritans. Some of them are to be found at Gaza, some at Damascus, and some at Grand Cairo.

SAMBUCUS, ELDER, in botany: A genus of the trigynia order, belonging to the pentandria class of plants; and in the natural method ranking under the

Sambucus
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Samiels.

43d order, *Dumosa*. The calyx is quinquepartite; the corolla quinquefid; the berry trispermous.

The most remarkable species are, 1. The nigra, or common black elder-tree, rises with a tree-stem, branching numerously into a large spreading head, twenty or thirty feet high; pinnated leaves, of two or three pair of oval lobes and an odd one; and large five-parted umbels of white flowers towards the ends of the branches, succeeded by bunches of black and other different coloured berries, in the varieties; which are—Common black-berried elder-tree—White-berried elder—Green-berried elder—Laciniated, or parsley-leaved elder, having the folioles much laciniated, so as to resemble parsley leaves—Gold-striped-leaved elder—Silver-striped elder—Silver-dusted elder. 2. The racemosa, racemose red-berried elder, rises with a tree-like stem, branching ten or twelve feet high, having reddish-brown branches and buds; pinnated leaves of six or seven oval deeply-sawed lobes; and compound, oval, racemous, clusters of whitish-green flowers, succeeded by oval clusters of red berries. This is a resident of the mountainous parts of the south of Europe, and is retained in our gardens as a flowering shrub, having a peculiar singularity in its oval-clustered flowers and berries. 3. The Canadensis, or Canada shrubby elder, rises with a shrubby stem, branching eight or ten feet high, having reddish shoots; somewhat bipinnated leaves, often ternate below, the other composed of five, seven, or nine oval lobes; and towards the ends of the branches, cymose quinquepartite umbels of flowers, succeeded by blackish red berries. All the sorts of elder are of the deciduous tribe, very hardy, and grow freely anywhere; are generally free shooters, but particularly the common elder and varieties, which make remarkably strong, jointed shoots, of several feet in length, in one season; and they flower mostly in summer, except the racemose elder, which generally begins flowering in April; and the branches being large, spreading, and very abundant, are exceedingly conspicuous; but they emit a most disagreeable odour. The flowers are succeeded in the most of the sorts by large bunches of ripe berries in autumn, which, although very unpalatable to eat, are in high estimation for making that well known cordial liquor called *elder wine*, particularly the common black-berried elder. The merit of the elder in gardening may be both for use and ornament, especially in large grounds.

SAMIAN EARTH, in the materia medica, the name of two species of marl used in medicine, viz. 1. The white kind, called by the ancients *collyrium samium*, being astringent, and therefore good in diarrhoeas, dysenteries, and hæmorrhagies; they also used it externally in inflammations of all kinds. 2. The brownish-white kind, called *asfer samius* by Dioscorides; this also stands recommended as an astringent.

SAMIELS, the Arabian name of a hot wind peculiar to the desert of Arabia. It blows over the desert in the months of July and August from the north-west quarter, and sometimes it continues with all its violence to the very gates of *Bagdad*, but never affects any body within the walls. Some years it does not blow at all, and in others it appears six, eight, or ten times, but seldom continues more than a few minutes at a time. It often passes with the apparent quickness of lightning. The Arabians and Persians, who are acquainted with

the appearance of the sky at or near the time this wind arises, have warning of its approach by a thick haze, which appears like a cloud of dust arising out of the horizon; and they immediately upon this appearance throw themselves with their faces to the ground, and continue in that position till the wind is passed, which frequently happens almost instantaneously; but if, on the contrary, they are not careful or brisk enough to take this precaution, which is sometimes the case, and they get the full force of the wind, it is instant death.

The above method is the only one which they take to avoid the effects of this fatal blast; and when it is over, they get up and look round them for their companions; and if they see any one lying motionless, they take hold of an arm or leg, and pull and jerk it with some force; and if the limb thus agitated separates from the body, it is a certain sign that the wind has had its full effect; but if, on the contrary, the arm or leg does not come away, it is a sure sign there is life remaining, although to every outward appearance the person is dead; and in that case they immediately cover him or them with clothes, and administer some warm diluting liquor to cause a perspiration, which is certainly but slowly brought about.

The Arabs themselves can say little or nothing about the nature of this wind, only that it always leaves behind it a very strong sulphureous smell, and that the air at these times is quite clear, except about the horizon, in the north-west quarter, before observed, which gives warning of its approach. We have not been able to learn whether the dead bodies are scorched, or dissolved into a kind of gelatinous substance; but from the stories current about them, there has been frequent reason to believe the latter; and in that case such fatal effects may be attributed rather to a noxious vapour than to an absolute and excessive heat. The story of its going to the gates of *Bagdad* and no farther may be reasonably enough accounted for, if the effects are attributed to a poisonous vapour, and not an excessive heat. The above mentioned wind, Samiel, is so well known in the neighbourhood of *Bagdad* and *Bassora*, that the very children speak of it with dread.

SAMOGITIA, a province of Poland, bounded on the north by Courland, on the east by Lithuania, on the west by the Baltic Sea, and on the south by Regal Prussia, being about 175 miles in length and 125 in breadth. It is full of forests and very high mountains, which feed a great number of cattle, and produce a large quantity of honey. There are also very active horses, in high esteem. The inhabitants are clownish, but honest; and they will not allow a young woman to go out in the night without a candle in her hand and two bells at her girdle. *Rossenna* and *Wormia* are the principal places.

SAMOIEDA, a country of the Russian empire, between Asiatic Tartary and Archangel, lying along the sea-coast as far as Siberia. The inhabitants are so rude a people that they can hardly pretend to humanity, except in their face and figure: they have little understanding, and in many things resemble brutes, for they will eat carrion of every kind. They travel on the snow on sledges, drawn with an animal like a reindeer, but with the horns of a stag. Those who have seen them affirm, that no people on the earth make such shocking figures: their stature is short; their shoulders and

Samiels
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Samoieda.

Ives's Voyage from
England to
India in
1754.

Samolus
||
Sampan.

and faces are broad, with flat broad noses, great blubber hanging lips, and staring eyes; their complexion is dark, their hair long and as black as pitch, and they have very little beards; and it is said that all the Samoied women have black nipples. If they have any religion at all, it is idolatry, though there has been some attempts of late to convert them. Their huts are made of birch bark sewed together, which is laid upon stakes set in the ground, and at the top is a hole to let out the smoke; the fire is made in the middle, and both men and women lie naked round them all night.—They have little regard to the nearness of kin, and take as many wives as they can keep: their only employment is hunting and fishing.

SAMOLUS, in botany: A genus of the monogynia order, belonging to the pentandria class of plants; and in the natural method ranking under the 21st order, *Precie*. The corolla is salver-shaped, the stamina surrounded by small scales at its throat. The capsule is unilocular inferior.

SAMOS (anc. geog.), an island at no great distance from the promontory Mycale, on the continent of the Hither Asia, and opposite to Ephesus; the distance only seven stadia (Strabo); a free island, in compass 87 miles (Pliny); or 100 (Isidorus): with a cognominal town (Ptolemy, Horace); famous for the worship and a temple of Juno, with a noted asylum (Virgil, Strabo, Tacitus); and hence their coin exhibited a peacock (Athenæus): The country of Pythagoras, who, to avoid the oppression of tyrants, retired to Italy, the land of freedom. Samos, though not so happy in producing wine, which Strabo wonders at, all the adjoining islands yielding a generous sort, yet abounds in all the necessities of life. The *Vasa Samia*, among earthen ware, were held in high repute. *Samii*, the people (Ovid).—The island is now in the hands of the Turks. It is about 32 miles in length, and 22 in breadth, and extremely fertile. The inhabitants live at their ease, their taxation by the Turks being moderate. The women are very nasty and ugly, and they never shift above once a month. They are clothed in the Turkish manner, except a red coif, and their hair hanging down their backs, with plates of silver or block-tin fastened to the ends.—They have abundance of melons, lentils, kidney-beans, and excellent muscadine grapes. They have white figs four times as big as the common sort, but not so well tasted. Their silk is very fine, and their honey and wax admirable; besides which, their poultry are excellent: they have iron mines, and most of the soil is of a rusty colour: they have also emery stone, and all the mountains are of white marble. The inhabitants are about 12,000, who are almost all Greeks; and the monks and priests occupy most part of the island. They have a bishop who resides at Cora. See **POLYCRATES**.

Osbec's Voy.
age to China
and the East
Indies.

SAMPAN, is a Chinese boat without a keel, looking almost like a trough; they are made of different dimensions, but are mostly covered. These boats are as long as sloops, but broader, almost like a baking trough; and have at the end one or more decks of bamboo sticks: the cover or roof is made of bamboo sticks, arched over in the shape of a grater; and may be raised or lowered at pleasure: the sides are made of boards, with little holes, with shutters instead of win-

dows: the boards are fastened on both sides to posts, which have notches like steps on the insides, that the roof may be let down, and rest on them: on both ends of the deck are commonly two little doors, at least there is one at the hindmost end. A fine white smooth carpet spread up as far as the boards makes the floor, which in the middle consists of loose boards; but this carpet is only made use of to sleep on. As these boats greatly differ from ours in shape, they are likewise rowed in a different manner: for two rowers, posting themselves at the back end of the sampan, work it forwards very readily by the motion of two oars; and can almost turn the vessel just as they please: the oars, which are covered with a little hollow quadrangular iron, are laid on iron swivels, which are fastened in the sides of the sampan: at the iron the oars are pieced, which makes them look a little bent: in common, a rower sits before with a short oar; but this he is forced to lay aside when he comes near the city, on account of the great throng of sampans; and this inconvenience has confirmed the Chinese in their old way of rowing. Instead of pitch, they make use of a cement like our putty, which we call *chinam*, but the Chinese call it *kiang*. Some authors say that this cement is made of lime and a resin exuding from the tree *tong yea*, and bamboo ockam.

Sampan
||
Samuel.

Besides a couple of chairs, they have the following furniture: two oblong tables or boards on which some Chinese characters are drawn; a lanthorn for the night-time, and a pot to boil rice in. They have also a little cover for their household god, decorated with gilt paper and other ornaments: before him stands a pot filled with ashes, into which the tapers are put before the idol. The candles are nothing else than bamboo chips, to the upper end of which saw-dust of sandal-wood is stuck on with gum. These tapers are everywhere lighted before the idols in the pagodas, and before the doors in the streets; and, in large cities, occasion a smoke very pernicious to the eyes. Before this idol stands some *samso*, or Chinese brandy, water, &c. We ought to try whether the Chinese would not like to use juniper-wood instead of sandal-wood; which latter comes from Surat, and has almost the same smell with juniper.

SAMSON, one of the judges of Israel, memorable for his supernatural strength, his victories over the Philistines, and his tragical end, as related in the book of *Judges*.

SAMSON'S POST, a sort of pillar erected in a ship's hold, between the lower deck and the kelson, under the edge of a hatchway, and furnished with several notches that serve as steps to mount or descend, as occasion requires. This post being firmly driven into its place, not only serves to support the beam and fortify the vessel in that place, but also to prevent the cargo or materials contained in the hold, from shifting to the opposite side, by the rolling of the ship in a turbulent and heavy sea.

BOOKS OF SAMUEL, two canonical books of the Old Testament, as being usually ascribed to the prophet Samuel.

The books of Samuel and the books of Kings are a continued history of the reigns of the kings of Israel and Judah; for which reason the books of Samuel are likewise styled *the first and second books of Kings*. Since the

Samyda,
Sana.

the first 24 chapters contain all that relates to the History of Samuel, and the latter part of the first book, and all the second include the relation of events that happened after the death of that prophet, it has been supposed that Samuel was author only of the first 24 chapters, and that the prophets Gad and Nathan finished the work. The first book of Samuel comprehends the transactions under the government of Eli and Samuel, and under Saul the first king; and also the acts of David while he lived under Saul; and is supposed to contain the space of 101 years. The second book contains the history of about 40 years, and is wholly spent in relating the transactions of David's reign.

SAMYDA, in botany: A genus of the monogynia order, belonging to the decandria class of plants; and in the natural method ranking with those of which the order is doubtful. The calyx is quinquepartite and coloured; there is no corolla; the capsule in the inside resembles a berry, is trivalved and unilocular; the seeds nestling.

Niebuhr's
Travels by
Heron.

SANA, or **SANAA**, a large, populous, and handsome town of Asia, capital of Arabia Felix, is situated in Proper Yemen, at the foot of mount Nikkum, on which are still to be seen the ruins of a castle, which the Arabs suppose to have been built by Shem. Near this mountain stands the castle; a rivulet runs upon the other side; and near it is the Bustan el Metwokkel, a spacious garden, which was laid out by Imam Metwokkel, and has been embellished with a fine garden by the reigning imam. The walls of the city, which are built of bricks, exclude this garden, which is inclosed within a wall of its own. The city, properly so called, is not very extensive: one may walk round it all in an hour. The city-gates are seven. Here are a number of mosques, some of which have been built by Turkish pachas. Sana has the appearance of being more populous than it actually is; for the gardens occupy a part of the space within the walls. In Sana are only 12 public baths; but many noble palaces, three of the most splendid of which have been built by the reigning Imam. The palace of the late Imam El Manzor, with some others, belong to the royal family, who are very numerous.

The Arabian palaces are built in a style of architecture different from ours. The materials are, however, burnt bricks, and sometimes even hewn stones; but the houses of the common people are of bricks which have been dried in the sun. There are no glass windows, except in one palace, near the citadel. The rest of the houses have, instead of windows, merely shutters, which are opened in fair weather, and shut when it is foul. In the last case, the house is lighted by a round wicket, fitted with a piece of Muscovy glass; some of the Arabians use small panes of stained glass from Venice.

At Sana, and in the other cities of the East, are great simseras or caravanferas for merchants and travellers. Each different commodity is sold in a separate market. In the market for bread, none but women are to be seen; and their little shops are portable. The several classes of mechanics work, in the same manner, in particular quarters in the open street. Writers go about with their desks, and make out briefs, copy-books, and instruct scholars in the art of writing, all

at the same time. There is one market where old clothes are taken in exchange for new.

Wood for the carpenter's purpose is extremely dear through Yemen; and wood for the fire at Sana is no less so. All the hills near the city are bleak and bare, and wood is therefore to be brought hither from the distance of three days journey; and a camel's burthen commonly costs two crowns. This scarcity of wood is particularly supplied by the use of a little pit-coal. Peats are burnt here; but they are so bad, that straw must be intermixed to make them burn.

Fruits are, however, very plentiful at Sana. Here are more than 20 different species of grapes, which, as they do not all ripen at the same time, continue to afford a delicious refreshment for several months. The Arabs likewise preserve grapes, by hanging them up in their cellars, and eat them almost through the whole year. The Jews make a little wine, and might make more if the Arabs were not such enemies to strong liquors. A Jew convicted of conveying wine into an Arab's house is severely punished; nay, the Jews must even use great caution in buying and selling it among themselves. Great quantities of grapes are dried here; and the exportation of raisins from Sana is considerable. One sort of these grapes are without stones, and contains only a soft grain, the presence of which is not perceptible in eating the raisin.

In the castle, which stands on a hill, are two palaces. "I saw (says Niebuhr) about it some ruins of old buildings, but, notwithstanding the antiquity of the place, no remarkable inscriptions. There is the mint, and a range of prisons for persons of different ranks. The reigning Imam resides in the city; but several princes of the blood-royal live in the castle. The battery is the most elevated place about these buildings; and there I met with what I had no expectation of, a German mortar, with this inscription, *Jörg Selos Gosmick, 1513*. I saw also upon the same battery seven iron cannons, partly buried in the sand, and partly set upon broken carriages. These seven small cannons, with six others near the gates, which are fired to announce the return of the different festivals, are all the artillery of the capital of Yemen."

SANADON (Noël Etienne), a Jesuit, was born at Rouen in 1676, and was a distinguished professor of humanity at Caen. He there became acquainted with Huet bishop of Avranches, whose taste for literature and poetry was similar to his own. Sanadon afterwards taught rhetoric at the university of Paris, and was entrusted with the education of the prince of Conti, after the death of Du Morceau. In 1728 he was made librarian to Louis XIV. an office which he retained to his death. He died on the 21st September 1733, in the 58th year of his age.

His works are, 1. Latin Poems, in 12mo, 1715, and reprinted by Barbou, in 8vo, 1754. His style possesses the graces of the Augustan age. His language is pure and nervous; his verses are harmonious, and his thoughts are delicate and well chosen; but sometimes his imagination flags. His Latin poems consist of Odes, Elegies, Epigrams, and others, on various subjects. 2. A translation of Horace, with Remarks, in 2 vols 4to, printed at Paris in 1727; but the best edition of this work was printed at Amsterdam in 1735, in 8vo's 12mo, in which are also inserted the

Sana,
Sanadon.

Sanballat,
Sanchez.

versions and notes of M. Dacier. Sanadon translated with elegance and taste; but he has not preserved the sublimity of the original in the odes, nor the energy and precision in the epistles and satires. In general, his version is rather a paraphrase than a faithful translation. Learned men have justly censured him for the liberty which he has taken in making considerable changes in the order and structure of the odes. He has also given offence by his uncouth orthography. 3. A Collection of Discourses delivered at different times, which afford strong proofs of his knowledge of oratory and poetry. 4. A book entitled *Prieres et Instructions Chretiennes*.

SANBALLAT, the chief or governor of the Cutheites or Samaritans, was always a great enemy to the Jews. He was a native of Horon, or Horonaim, a city beyond Jordan, in the country of the Moabites. He lived in the time of Nehemiah, who was his great opponent, and from whose book we learn his history. There is one circumstance related of him which has occasioned some dispute among the learned; and the state of the question is as follows: When Alexander the Great came into Phoenicia, and sat down before the city of Tyre, Sanballat quitted the interests of Darius king of Persia, and went at the head of 8000 men to offer his service to Alexander. This prince readily entertained him, and being much solicited by him, gave him leave to erect a temple upon mount Gerizim, where he constituted his son-in-law Manasseh the high-priest. But this story carries a flagrant anachronism: for 120 years before this, that is, in the year of the world 3550, Sanballat was governor of Samaria; wherefore the learned Dr Prideaux (in his Connection of the Histories of the Old and New Testament) supposes two Sanballats, and endeavours to reconcile it to truth and probability, by showing it to be a mistake of Josephus. This author makes Sanballat to flourish in the time of Darius Codomannus, and to build his temple upon mount Gerizim by licence from Alexander the Great; whereas it was performed by leave from Darius Nothus, in the 15th year of his reign. This takes away the difficulty arising from the great age of Sanballat, and brings him to be contemporary with Nehemiah, as the Scripture history requires.

SANCHEZ (François), called in Latin *Sanctius*, was of Las Brocas in Spain, and has been dignified by his own countrymen with the pompous titles of *le Pere de la Langue Latine, et le Docteur de tous les Gens-de-lettres*. He wrote, 1. An excellent treatise intitled *Minerva, or de Causis Linguae Latinae*, which was published at Amsterdam in 1714, in 8vo. The authors of the *Portroyal Methode de la Langue Latine* have been much indebted to this work. 2. The Art of Speaking, and the Method of translating Authors. 3. Several other learned pieces on grammar. He died in the year 1600, in his 77th year.

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We must be careful to distinguish him from another *Sanchoia* *tho.* *François Sanchez*, who died at Toulouse in 1632. This last was a Portuguese physician who settled at Toulouse, and, though a Christian, was born of Jewish parents. He is said to have been a man of genius and a philosopher. His works have been collected under the title of *Opera Medica. His juncti sunt tractatus quidam philosophici non insubtiles*. They were printed at Toulouse in 1636.

SANCHONIATHO, a Phenician philosopher and historian, who is said to have flourished before the Trojan war about the time of Sémiramis. Of this most ancient writer, the only remains extant are sundry fragments of cosmogony, and of the history of the gods and first mortals, preserved by Eusebius and Theodoret; both of whom speak of Sanchoniatho as an accurate and faithful historian; and the former adds, that his work, which was translated by Philo-Byblius from the Phenician into the Greek language, contains many things relating to the history of the Jews which deserve great credit, both because they agree with the Jewish writers, and because the author received these particulars from the annals of Hierombalus, a priest of the god Jao.

Several modern writers, however, of great learning, have called in question the very existence of Sanchoniatho, and have contended with much plausibility, that the fragments which Eusebius adopted as genuine upon the authority of Porphyry, were forged by that author, or the pretended translator Philo, from enmity to the Christians, and that the Pagans might have something to show of equal antiquity with the books of Moses. These opposite opinions have produced a controversy that has filled volumes, and of which our limits would hardly admit of an abstract. We shall therefore in few words state what to us appears to be the truth, and refer such of our readers as are desirous of fuller information to the works of the authors (A) mentioned at the bottom of the page.

The controversy respecting Sanchoniatho resolves itself into two questions: 1. Was there in reality such a writer? 2. Was he of the very remote antiquity which his translator claims for him?

That there was really such a writer, and that the fragments preserved by Eusebius are indeed parts of his history interpolated perhaps by the translator (B), we are compelled to believe by the following reasons. Eusebius, who admitted them into his work as authentic, was one of the most learned men of his age, and a diligent searcher into antiquity. His conduct at the Nicene council shows, that on every subject he thought for himself, neither biased by authority to the one side, nor carried over by the rage of innovation to the other. He had better means than any modern writer can have of satisfying himself with respect to the authenticity of a very extraordinary work, which had then but lately

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been

(A) Bochart, Scaliger, Vossius, Cumberland, Dodwell, Stillingfleet, Mosheim's Cudworth, and Warburton.

(B) Of this there are indeed several proofs. Philo makes Sanchoniatho speak of *Byblus* as the most ancient city of Phenicia, which, in all probability, it was not. We read in the book of Judges of *Berith* or *Berytus*, the city where Sanchoniatho himself lived; but not of *Byblus*, which was the native city of Philo, and to which he is therefore partial. He makes him likewise talk of the Greeks at a period long before any of the Grecian states were known or probably peopled.

Sanchoniatho.

been translated into the Greek language, and made generally known; and there is nothing in the work itself, or at least in those parts of it which he has preserved, that could induce a wise and good man to obtrude it upon the public as genuine, had he himself suspected it to be spurious. Too many of the Christian fathers were indeed very credulous, and ready to admit the authenticity of writings without duly weighing the merits of their claim; but then such writings were always believed to be favourable to the Christian cause, and inimical to the cause of Paganism. That no man of common sense could suppose the cosmogony of Sanchoniatho favourable to the cause of revealed religion, a farther proof cannot be requisite than what is furnished by the following extract.

"He supposeth, or affirms, that the principles of the universe was a dark and windy air, or a wind made of dark air, and a turbulent evening *chaos*; and that these things were boundless, and for a long time had no bound or figure. But when this wind fell in love with his own principles, and a mixture was made, that mixture was called *desire* or *cupid* (*πῶλος*).

"This mixture completed, was the beginning of the (*κτίσις*) making of all things. But that wind did not know its own production; and of this, with that wind, was begotten *Mot*, which some call *Mud*, others the putrefaction of a watery mixture. And of this came all the seed of this building, and the generation of the universe.

"But there were certain animals, which had no sense, out of which were begotten intelligent animals, and were called *Zophesemin*, that is, the spies or overseers of Heaven; and were formed alike in the shape of an egg. Thus shone out *Mot*, the sun and the moon, the less and the greater stars.

"And the air shining thoroughly with light, by its fiery influence on the sea and earth, winds were begotten, and clouds and great effluxions of the heavenly waters. And when all these things first were parted, and were separated from their proper place by the heat of the sun, and then all met again in the air, and dashed against one another, and were so broken to pieces; whence thunders and lightnings were made: and at the stroke of these thunders the fore-mentioned intelligent animals were awakened, and frightened with the sound; and male and female stirred in the earth and in the sea: This is their generation of animals.

"After these things our author (Sanchoniatho) goes on saying: These things are written in the *Cosmogony* of *Tautus*, and in his memoirs; and out of the conjectures, and surer natural signs which his mind saw, and found out, and wherewith he hath enlightened us.

"Afterwards declaring the names of the winds, *north* and *south* and the rest, he makes this epilogue. 'But these first men consecrated the plants shooting out of the earth, and judged them gods, and worshipped them; upon whom they themselves lived, and all their posterity and all before them: to these they made their meat and drink offerings.' Then he concludes: 'these were the devices of worship agreeing with the weakness and want of boldness in their minds.'

Let us suppose Eusebius to have been as weak and credulous as the darkest monk in the darkest age of Europe, a supposition which no man will make who knows any thing of the writings of that eminent histo-

rian; what could he see in this senseless jargon, which even a dreaming monk would think of employing in support of Christianity? Eusebius calls it, and calls it truly, direct atheism; but could he imagine that an ancient system of atheism would contribute so much to make the Pagans of his age admit as divine revelations the books of the Old and New Testaments, that he should be induced to adopt, without examination, an impudent forgery not 200 years old as genuine remains of the most remote antiquity?

If this Phenician cosmogony be a fabrication of Porphyry, or of the pretended translator, it must surely have been fabricated for some purpose; but it is impossible for us to conceive what purpose either of these writers could have intended to serve by forging a system so extravagantly absurd. Porphyry, though an enemy to the Christians, was not an atheist, and would never have thought of making an atheist of him whom he meant to obtrude upon the world as the rival of Moses. His own principles were those of the Alexandrian Platonists; and had he been the forger of the works which bear the name of Sanchoniatho, instead of the incomprehensible jargon about *dark wind*, *evening chaos*, *Mot*, the *overseers of heaven in the shape of an egg*, and *animation proceeding from the sound of thunder*, we should doubtless have been amused with refined speculations concerning the operations of the *Demiurgus* and the other persons in the Platonic Triad. See PLATONISM and PORPHYRY.

Father Simon of the oratory imagines* that the purpose for which the history of Sanchoniatho was forged, was to support Paganism, by taking from it its mythology and allegories, which were perpetually objected to it by the Christian writers; but this learned man totally mistakes the matter. The primitive Christians were too much attached to allegories themselves to rest their objections to Paganism on such a foundation: what they objected to that system was the immoral stories told of the gods. To this the Pagan priests and philosophers replied, that these stories were only *mythologic allegories*, which veiled all the great truths of Theology, Ethics, and Physics. The Christians said, this could not be; for that the stories of the gods had a substantial foundation in fact, these gods being only dead men deified, who, in life, had like passions and infirmities with other mortals. This then was the objection which the forger of the works of Sanchoniatho had to remove, if he really forged them in support of Paganism; but, instead of doing so, he gives the genealogy and history of all the greater gods, and shows, that they were men deified after death for the exploits, some of them grossly immoral, which they had performed in this world. We have elsewhere (POLYTHEISM, n° 17.) given his account of the deification of *Chryser*, and *Ouranos*, and *Ge*, and *Hyphistos*, and *Muth*; but our readers may not perhaps be ill pleased to accompany him through the history of *Ouranos* and *Cronus*, two of his greatest gods; whence it will appear how little his writings are calculated to support the tottering cause of Paganism against the objections which were then urged to it by the Christian apologists.

"Ouranos (says he), taking the kingdom of his father, married *Ge* his sister, and by her had four sons; *Ilus*, who is called *Cronus*; *Betylus*; *Dagon*, who is *Siton*, or the god of corn; and *Atlas*. But by other wives

Ouranos

Sanchoniatho.

Sanchonia-
tho.

Ouranos had much issue, wherefore Ge being grieved at it and jealous, reproached Ouranos, so as they parted from each other. But Ouranos, though he parted from her, yet by force invading her, and lying with her when he listed, went away again; and he also attempted to kill the children he had by her. Ge also often defended or avenged herself, gathering auxiliary powers unto her. But when Cronus came to man's age, using Hermes Trismegistus as his counsellor and assistant (for he was his secretary), he opposed his father Ouranos, avenging his mother. But Cronus had children, Persephone and Athena; the former died a virgin, but by the counsel of the latter Athena, and of Hermes, Cronus made of iron a scimitar and a spear. Then Hermes, speaking to the assistants of Cronus with enchanting words, wrought in them a keen desire to fight against Ouranos in the behalf of Ge; and thus Cronus warring against Ouranos, drove him out of his kingdom, and succeeded in the imperial power or office. In the fight was taken a well-beloved concubine of Ouranos big with child. Cronus gave her in marriage to Dagon, and she brought forth at his house what she had in her womb by Ouranos, and called him *Demaroon*. After these things Cronus builds a wall round about his house, and founds *Byblus* the first city in Phenicia. Afterwards Cronus, suspecting his own brother Atlas, with the advice of Hermes, throwing him into a deep hole of the earth, there buried him, and having a son called *Sadid*, he dispatched him with his own sword, having a suspicion of him, and deprived his own son of life with his own hand. He also cut off the head of his own daughter, so that all the gods were amazed at the mind of Cronus. But in process of time, Ouranos being in flight, or banishment, sends his daughter *Astarte*, with two other sisters *Rhea* and *Dione*, to cut off Cronus by deceit, whom Cronus taking, made wives of these sisters. Ouranos, understanding this, sent *Eimarmene* and *Hore*, Fate and Beauty, with other auxiliaries, to war against him: but Cronus, having gained the affections of these also, kept them with himself. Moreover, the god Ouranos devised *Batulia*, contriving stones that moved as having life. But Cronus begat on *Astarte* seven daughters called *Titanides* or *Artemides*; and he begat on *Rhea* seven sons, the youngest of whom, as soon as he was born, was consecrated a god. Also by *Dione* he had daughters, and by *Astarte* moreover two sons, *Pothos* and *Eros*, i. e. Cupid and Love. But *Dagon*, after he had found out bread, corn, and the plough, was called *Zeus Arotrius*. To *Sydyc*, or the just, one of the *Titanides* bare *Asclepius*. Cronus had also in *Peraa* three sons, 1. *Cronus* his father's namesake. 2. *Zeus Belus*. 3. *Apollo*."

Is it conceivable, that a writer so acute as Porphyry, or indeed that any man of common sense either in his age or in that of Philo, would forge a book filled with such stories as these, in order to remove the Christian objections to the immoral characters of the Pagan divinities? The very supposition is impossible to be made. Nor let any one imagine that Sanchoniatho is here writing allegorically, and by his tales of *Ouranos*, and *Ge*, and *Cronus*, is only personifying the *heaven*, the *earth*, and *time*. On the contrary, he assures us, that *Ouranos*, or *Epigeus*, or *Autochthon* (for he gives him all these names), was the son of one *Elioun* or *Hyphissos*, who dwelt about *Byblus*, and that from him the ele-

ment which is over us was called *heaven*, on account of its excellent beauty, as the earth was named *Ge* after his sister and wife. And his translator is very angry * with the Neoteric Greeks, as he calls them, because that, "by a great deal of force and straining, they laboured to turn all the stories of the gods into allegories and physical discourses." This proves unanswerably, that the author of this book, whoever he was, did not mean to veil the great truths of religion under the cloak of mythologic allegories; and therefore, if it was forged by Porphyry in support of Paganism, the forger so far mistook the state of the question between him and his adversaries, that he contrived a book, which, if admitted to be ancient, totally overthrew his own cause.

The next thing to be inquired into with respect to Sanchoniatho is his antiquity. Did he really live and write at so early a period as Porphyry and Philo pretend? We think he did not; and what contributes not a little to confirm us in our opinion, is that mark of national vanity and partiality, common to after-times, in making the sacred mysteries of his own country original, and conveyed from Phenicia into Egypt. This, however, furnishes an additional proof that Porphyry was not the forger of the work; for he well knew that the mysteries had their origin in Egypt (see MYSTERIES), and would not have fallen into such a blunder. He is guilty, indeed, of a very great anachronism, when he makes Sanchoniatho contemporary with Semiramis, and yet pretends that what he writes of the Jews is compiled from the records of Hierombalus the priest of the god Jao; for Bochart has made it appear in the highest degree probable †, that *Hierombalus* or *Jeromb-baal* is the *Jerub-baal* or *Gideon* of scripture.

Between the reign of Semiramis and the Trojan war a period elapsed of near 800 years, whereas Gideon flourished not above seventy years before the destruction of Troy. But supposing Sanchoniatho to have really consulted the records of Gideon, it by no means follows that he flourished at the same period with that judge of Israel. He speaks of the building of Tyre as an ancient thing, while our best chronologers ‡ place it in the time of Gideon. Indeed, were we certain that any writings had been left by that holy man, we should be obliged to conclude, that a large tract of time had intervened between the death of their author and their falling into the hands of Sanchoniatho; for, surely, they could not, in a short period, have been so completely corrupted as to give any countenance to his impious absurdities. His atheistic cosmogony he does not indeed pretend to have got from the annals of the priest of Jao, but from records which were deposited in his own town of Berytus by Thoth a Phenician philosopher, who was afterwards made king of Egypt. But surely the annals of Gideon, if written by himself, and preserved pure to the days of Sanchoniatho, must have contained so many truths of the Mosaic religion, as must have prevented any man of sense from adopting so impossible a theory as Thoth's, though sanctioned by the greatest name of profane antiquity. Stillingfleet indeed thinks it most probable that Sanchoniatho became acquainted with the most remarkable passages of the life of Jerub-baal from annals written by a Phenician pen. He observes, that immediately after the death of Gideon, the Israelites, with their usual proneness to idolatry, worshiped *Baal-berith*, or the idol of Berytus,

Sanchonia-
tho.* *Apud Eu-
seb. Prep.
Evang.
lib. 1. cap.
6.*† *Geogr. Sac.
p. 2. book 2.
lib. 2. cap.
17.*‡ *Scaliger.*

Sanchonia-
tho,
Sancroft.

the town in which Sanchoniatho lived; and from this circumstance he concludes that there must have been such an intercourse between the Hebrews and Berytians, that in process of time the latter people might assume to themselves the Jerub-baal of the former, and hand down his actions to posterity as those of a priest instead of a great commander. All this may be true; but if so, it amounts to a demonstration that the antiquity of Sanchoniatho is not so high by many ages as that which is claimed for him by Philo and Porphyry, though he may still be more ancient, as we think Vossius has proved him to be*, than any other profane historian whose writings have come down to us either entire or in fragments.

* *De Hist. Grec. lib. i. cap. i.*

But granting the authenticity of Sanchoniatho's history, what, it may be asked, is the value of his fragments, that we should be at any trouble to ascertain whether they be genuine remains of high antiquity, or the forgeries of a modern impostor? We answer, with the illustrious Stillingfleet, that though those fragments contain such absurdities as it would be a disgrace to reason to suppose credible; though the whole cosmogony is the grossest sink of atheism; and though many persons make a figure in the history, whose very existence may well be doubted; yet we, who have in our hands the light of divine revelation, may in this dungeon discover many excellent reliicks of ancient tradition, which throw no feeble light upon many passages of holy scripture, as they give us the origin and progress of that idolatry which was so long the opprobrium of human nature. They furnish too a complete confutation of the extravagant chronology of the Chaldeans and Egyptians, and show, if they be genuine, that the world is indeed not older than it is said to be by Moses. We shall conclude the article by earnestly recommending to our readers an attentive perusal of *Cumberland's SANCHONIATHO*.

SANCROFT (William), archbishop of Canterbury, was born at Fressingfield in Suffolk in 1616; and admitted into Emanuel college, Cambridge, in 1633. In 1642 he was elected a fellow; and, for refusing to take the covenant, was ejected from his fellowship. In 1660 he was chosen one of the university preachers; and in 1663 was nominated to the deanry of York. In 1664 he was installed dean of St Paul's. In this station he set himself with unwearied diligence to repair the cathedral, till the fire of London in 1666 employed his thoughts on the more noble undertaking of rebuilding it, toward which he gave 1400l. He also rebuilt the deanry, and improved the revenue of it. In 1668 he was admitted archdeacon of Canterbury, on the king's presentation. In 1677, being now prolocutor of the convocation, he was unexpectedly advanced to the archbishopric of Canterbury. In 1678 he was committed to the tower, with six other bishops, for presenting a petition to the king against reading the declaration of indulgence. Upon king James II.'s withdrawing himself, he concurred with the lords in a declaration to the prince of Orange for a free parliament, and due indulgence to the Protestant dissenters. But when that prince and his consort were declared king and queen, his grace refusing to take the oaths to their majesties, he was suspended and deprived. He lived in a very private manner, till he died in 1693. His learning, integrity, and piety, made him an exalted ornament of the church.

He published a volume in 12mo, intitled *Modern Politics*, taken from Machiavel, Borgia, and other choice authors; Familiar Letters to Mr North, an 8vo pamphlet; and three of his sermons were printed together after his death.

Sanctifica-
tion
||
Sand.

SANCTIFICATION, the act of sanctifying, or rendering a thing holy. The reformed divines define sanctification to be an act of God's grace, by which a person's desires and affections are alienated from the world; and by which he is made to die to sin, and to live to righteousness; or, in other words, to feel an abhorrence of all vice, and a love of religion and virtue.

SANCTION, the authority given to a judicial act, by which it becomes legal and authentic.

SANCTORIUS, a most ingenious and learned physician, was a professor in the university of Padua, in the beginning of the 17th century. He contrived a kind of statical chair, by means of which, after estimating the aliments received, and the sensible discharges, he was enabled to determine with great exactness the quantity of insensible perspiration, as well as what kind of victuals and drink increased or diminished it. On these experiments he erected a curious system, which he published under the title of *De medicina statica*; of which we have an English translation by Dr Quincy. Sanctorius published several other treatises, which shewed great abilities and learning.

SANCTUARY, among the Jews, also called *Sanctum sanctorum*, or *Holy of holies*, was the holiest and most retired part of the temple of Jerusalem, in which the ark of the covenant was preserved, and into which none but the high-priest was allowed to enter, and that only once a-year, to intercede for the people.

Some distinguish the sanctuary from the *sanctum sanctorum*, and maintain that the whole temple was called the *sanctuary*.

To try and examine any thing by the weight of the sanctuary, is to examine it by a just and equal scale; because, among the Jews, it was the custom of the priests to keep stone weights, to serve as standards for regulating all weights by, though these were not at all different from the royal or profane weights.

SANCTUARY, in the Romish church, is also used for that part of the church in which the altar is placed, encompassed with a rail or balustrade.

SANCTUARY, in our ancient customs, the same with ASYLUM.

SAND, in natural history, a genus of fossils, the characters of which are, that they are found in minute concretions; forming together a kind of powder, the genuine particles of which are all of a tendency to one determinate shape, and appear regular though more or less complete concretions; not to be dissolved or disunited by water, or formed into a coherent mass by means of it, but retaining their figure in it; transparent, vitrifiable by extreme heat, and not dissoluble in nor effervescent with acids. Sands are subject to be variously blended, both with homogeneous and heterogeneous substances, as that of talks, &c. and hence, as well as from their various colours, are subdivided into, 1. White sands, whether pure or mixed with other arenaceous or heterogeneous particles; of all which there are several species, differing no less in the fineness of their particles than in the different degrees of colour, from a bright and shining white,

Sand. white, to a brownish, yellowish, greenish, &c. white.
 2. The red and reddish sands, both pure and impure.
 3. The yellow sands, whether pure or mixed, are also very numerous. 4. The brown sands, distinguished in the same manner. 5. The black sands, whereof there are only two species, viz. a fine shining greyish-black sand, and another of a fine shining reddish-black colour.
 6. The green kind; of which there is only one known species, viz. a coarse variegated dusky green sand, common in Virginia.

Sand is of great use in the glass-manufacture; a white kind of sand being employed for making of the white glass, and a coarse greenish-looking sand for the green glass.

In agriculture, it seems to be the office of sand to make unctuous earths fertile, and fit to support vegetables, &c. For earth alone, we find, is liable to coalesce, and gather into a hard coherent mass, as appears in clay; and being thus embodied, and as it were glued together, is no way disposed to nourish vegetables. But if such earth be mixed with sand, its pores are thereby kept open, and the earth itself loose, so as thus to give room for the juices to ascend, and for plants to be nourished thereby. A vegetable planted only in sand, or in a fat glebe, or in earth, receives little growth or increase; but a mixture of both renders the mass fertile. In effect, earth is in some measure made organical by means of sand; pores and spaces, something analogous to vessels, being thereby maintained, by which the juices may be conveyed, prepared, digested, circulated, and at length discharged. Common sand is, therefore, a very good addition, by way of manure, to all sorts of clay-lands; it warms them, and makes them more open and loose.

SAND-Bugs, in the art of war. See *SACKS of Earth*.

SAND-Eel, in ichthyology. See *AMMODYTES*.

SAND-Floods, a name given to the flowing of sand so common in the deserts of Arabia. Mr Bruce gives the following accurate description of some that he saw in travelling thro' that long and dreary desert. "At one o'clock (says he) we alighted among some acacia-trees at Waadi el Halboub, having gone twenty-one miles. We were here at once surprised and terrified by a sight surely one of the most magnificent in the world. In that vast expanse of desert from west and to north-west of us, we saw a number of prodigious pillars of sand at different distances, at times moving with great celerity, at others stalking on with a majestic slowness: at intervals we thought they were coming in a few minutes to overwhelm us; and small quantities of sand did actually more than once reach us. Again they would retreat so as to be almost out of sight, their tops reaching to the very clouds. There the tops often separated from the bodies; and these, once disjoined, dispersed in the air, and did not appear more. Sometimes they were broken near the middle, as if struck with a large cannon shot. About noon they began to advance with considerable swiftness upon us, the wind being very strong at north. Eleven of them ranged alongside of us about the distance of three miles. The greatest diameter of the largest appeared to me at that distance as if it would measure ten feet. They retired from us with a wind at south-east, leaving an impression upon my mind to which I can give no name, though surely one ingredient in it was fear, with a considerable deal

of wonder and astonishment. It was in vain to think of flying, the swiftest horse or fastest sailing ship could be of no use to carry us out of this danger; and the full persuasion of this rivetted me as if to the spot where I stood, and let the camels gain on me so much in my state of lameness, that it was with some difficulty I could overtake them.

"The same appearance of moving pillars of sand presented themselves to us this day in form and disposition like those we had seen at Waadi Halboub, only they seemed to be more in number and less in size. They came several times in a direction close upon us, that is, I believe, within less than two miles. They began immediately after sun-rise, like a thick wood, and almost darkened the sun: his rays shining through them for near an hour, gave them an appearance of pillars of fire. Our people now became desperate: the Greek shrieked out, and said it was the day of judgment. Ismael pronounced it to be hell, and the Tucorories, that the world was on fire. I asked Idris if ever he had before seen such a sight? He said he had often seen them as terrible, though never worse; but what he feared most was that extreme redness in the air, which was a sure preface of the coming of the simoom." See *SIMOOM*.

The flowing of sand, though far from being so tremendous and hurtful as in Arabia, is of very bad consequences in this country, as many valuable pieces of land have thus been entirely lost; of which we give the following instances from Mr Pennant, together with a probable means of preventing them in future. "I have more than once (says he), on the eastern coasts of Scotland, observed the calamitous state of several extensive tracts, formerly in a most flourishing condition, at present covered with sands, unstable as those of the deserts of Arabia. The parish of Furvie, in the county of Aberdeen, is now reduced to two farms, and above L. 500 a-year lost to the Errol family, as appears by the oath of the factor in 1600, made before the court of session, to ascertain the minister's salary. Not a vestige is to be seen of any buildings, unless a fragment of the church.

"The estate of Coubin, near Forres, is another melancholy instance. This tract was once worth L. 300 a-year, at this time overwhelmed with sand. This strange inundation was still in motion in 1769, chiefly when a strong wind prevailed. Its motion is so rapid, that I have been assured, that an apple-tree has been so covered with it in one season, that only the very summit appeared. This distress was brought on about ninety years ago, and was occasioned by the cutting down some trees, and pulling up the bent or star which grew on the sand-hills; which at last gave rise to the act of 15 George II. c. 33. to prohibit the destruction of this useful plant.

"I beg leave to suggest to the public a possible means of putting a stop to these destructive ravages. Providence hath kindly formed this plant to grow only in pure sand. Mankind was left to make, in after-times, an application of it suitable to their wants. The sand-hills, on a portion of the Flintshire shores, in the parish of Llanasa, are covered with it naturally, and kept firm in their place. The Dutch perhaps owe the existence of part at least of their country to the sowing of it on the *mobile solum*, their sand-banks.

"My humane and amiable friend, the late Benjamin Stillingfleet,

Sand.

Sand.

Stillington, Esq; recommended the sowing of this plant on the sandy wilds of Norfolk, that its matted roots might prevent the deluges of sand which that country experiences. It has been already remarked, that wheresoever this plant grows the salutary effects are soon observed to follow. A single plant will fix the sand, and gather it into a hillock; these hillocks, by the increase of vegetation, are formed into larger, till by degrees a barrier is made often against the encroachments of the sea; and might as often prove preventative of the calamity in question. I cannot, therefore, but recommend the trial to the inhabitants of many parts of North Britain. The plant grows in most places near the sea, and is known to the Highlanders by the name of *murab*; to the English by that of *bent-star*, *mat-grass*, or *marram*. Linnaeus calls it *arundo arenaria*. The Dutch call it *helm*. This plant hath stiff and sharp-pointed leaves, growing like a rush, a foot and a half long: the roots both creep and penetrate deeply into their sandy beds: the stalk bears an ear five or six inches long, not unlike rye; the seeds are small, brown, and roundish. By good fortune, as old Gerard observes, no cattle will eat or touch this vegetable, allotted for other purposes, subservient to the use of mankind."

SAND-Piper, in ornithology. See TRINGA.

SAND-Stone, a genus of stones belonging to the order of *saxa*; and including all those which consist of such minute particles that they cannot easily be discerned by the eye. The species enumerated by Cronstedt are,

1. Those cemented by a clay, of which there are two varieties; one with porcelain clay, the other with common clay. The former is met with in Sweden under the stratum of coal in a coal-mine in the province of Shone, and is very hard and refractory in the fire; the other is found in the island of Gothland.

2. With lime, resembling mortar made with coarse sand. There are two varieties, one consisting of transparent grey-coloured grains of quartz and white limestone, the other of a loose texture, hardening in the air; but having the particles too fine to be visible. The former of these is found in Sweden, the latter in France and Livonia.

3. Sand-stone having its particles bound together by an unknown cement. Of this there are four varieties; 1. Loose; 2. Somewhat hard; 3. Compact; 4. Very hard; all of them found in different parts of Sweden.

4. Cemented by rust of iron, found in the form of loose stones in several places.

Cronstedt informs us that the greatest part of sand-stones consist of quartz and mica, being those substances which most readily admit of granulation without being reduced to powder. Some years ago the Baron de Dietrich showed a singular variety of sand-stone at Paris. It consists of small grains of hard quartz which strike fire with steel united with some micaceous particles. It is flexible and elastic, the flexibility depending on the micaceous part and softness of the gluten with which the particles are cemented. This elastic stone is said to have been found at Brazil, and brought to Germany by his excellency the marquis de Lavradio. There are also two tables of white marble, kept in the palace of Borghese at Rome, which have the same property. But the sparry particles of their substance, though transparent, are rather soft, and may be easily separated

by the nail. They effervesce with aquafortis, and there is also a small mixture of minute particles of talk or mica. Sandal, Sandarach.

Sand-stones are of great use in buildings which are required to resist air, water, and fire. Some of them are soft in the quarry, but become hard when exposed to the air. The loose ones are most useful, but the solid and hard ones crack in the fire, and take a polish when used as grindstones. Stones of this kind ought therefore to be nicely examined before they are employed for the usual purposes. Our author observes that the working masons, or stone-cutters, ought to wear a piece of frize or baize before their mouths, to preserve themselves from a consumption which their business is otherwise apt to bring on. Limestone, however, is not observed to have this effect.

To the list of sand-stones Fabroni adds gritstone, of greater or less hardness; mostly of a grey, and sometimes of a yellowish colour, composed of a siliceous and micaceous sand, but rarely of a sparry kind, with greater or lesser particles closely connected with an argillaceous cement. It strikes fire with steel, vitrifies in a strong fire, and is generally indissoluble in acids. It is used for mill-stones, whet-stones, and sometimes for filtering stones, as well as for building.

SANDAL, in antiquity, a rich kind of slipper worn on the feet by the Greek and Roman ladies, made of gold, silk, or other precious stuff; consisting of a sole, with an hollow at one extreme to embrace the ankle, but leaving the upper part of the foot bare.

SANDAL, is also used for a shoe or slipper worn by the pope and other Romish prelates when they officiate. It is also the name of a sort of slipper worn by several congregations of reformed monks. This last consists of no more than a mere leathern sole, fastened with latches or buckles, all the rest of the foot being left bare. The capuchins wear sandals; the recolects, clogs; the former are of leather, and the latter of wood.

SANDAL-Wood. See SAUNDERS.

SANDARACH, in natural history, a very beautiful native fossil, though too often confounded with the common factitious red arsenic, and with the red matter formed by melting the common yellow orpiment.

It is a pure substance, of a very even and regular structure, is throughout of that colour which our dyers term an *orange scarlet*, and is considerably transparent even in the thickest pieces. But though, with respect to colour, it has the advantage of cinnabar while in the mass, it is vastly inferior to it when both are reduced to powder. It is moderately hard, and remarkably heavy; and, when exposed to a moderate heat, melts and flows like oil: if set on fire, it burns very briskly.

It is found in Saxony and Bohemia, in the copper and silver mines; and is sold to the painters, who find it a very fine and valuable red: but its virtues or qualities in medicine are no more ascertained at this time than those of the yellow orpiment.

Gum-SANDARACH, is a dry and hard resin, usually met with in loose granules, of the bigness of a pea, a horse-bean, or larger; of a pale whitish yellow colour, transparent, and of a resinous smell, brittle, very inflammable, of an acrid and aromatic taste, and diffusing a very pleasant smell when burning. It is produced from

Sandemani- a species of the juniper; (see JUNIPERUS.) It flows only from these trees in hot countries: but the natives promote its discharge by making incisions in the bark.

Sandarach is esteemed good in diarrhoeas and in hæmorrhagies.

The varnish-makers make a kind of varnish of it, by dissolving it in oil of turpentine or linseed, or in spirit of wine.

Pounded SANDARACH. See POUNCE.

SANDEMANIANS, in ecclesiastical history, a modern sect that originated in Scotland about the year 1728; where it is at this time distinguished by the name of *Glassites*, after its founder Mr John Glas, who was a minister of the established church in that kingdom; but being charged with a design of subverting the national covenant, and sapping the foundation of all national establishments by the kirk judicatory, was expelled by the synod from the church of Scotland. His sentiments are fully explained in a tract published at that time, intitled, "The Testimony of the King of Martyrs," and preserved in the first volume of his works. In consequence of Mr Glas's expulsion, his adherents formed themselves into churches, conformable in their institution and discipline to what they apprehended to be the plan of the first churches recorded in the New Testament. Soon after the year 1755, Mr Robert Sandeman, an elder in one of these churches in Scotland, published a series of letters addressed to Mr Hervey, occasioned by his Theron and Aspasio; in which he endeavours to show, that his notion of faith is contradictory to the scripture account of it, and could only serve to lead men, professedly holding the doctrines commonly called *Calvinistic*, to establish their own righteousness upon their frames, inward feelings, and various acts of faith. In these letters Mr Sandeman attempts to prove, that faith is neither more nor less than a simple assent to the divine testimony concerning Jesus Christ, recorded in the New Testament; and he maintains, that the word *faith*, or *belief*, is constantly used by the apostles to signify what is denoted by it in common discourse, viz. a persuasion of the truth of any proposition, and that there is no difference between believing any common testimony, and believing the apostolic testimony, except that which results from the nature of the testimony itself. This led the way to a controversy, among those who were called *Calvinists*, concerning the nature of justifying faith; and those who adopted Mr Sandeman's notion of it, and who took the denomination of *Sandemanians*, formed themselves into church order, in strict fellowship with the churches in Scotland, but holding no kind of communion with other churches. The chief opinions and practices in which this sect differs from other Christians, are, their weekly administration of the Lord's Supper; their love-feasts, of which every member is not only allowed but required to partake, and which consist of their dining together at each other's houses in the interval between the morning and afternoon service; their kiss of charity used on this occasion, at the admission of a new member, and at other times, when they deem it to be necessary or proper; their weekly collection before the Lord's Supper, for the support of the poor, and defraying other expenses; mutual exhortation; abstinence from blood and things strangled; washing each other's feet, the precept concerning which, as well as other precepts, they

understand literally; community of goods, so far as that every one is to consider all that he has in his possession and power as liable to the calls of the poor and church; and the unlawfulness of laying up treasures on earth, by setting them apart for any distant, future, and uncertain use. They allow of public and private diversions, so far as they are not connected with circumstances really sinful; but apprehending a lot to be sacred, disapprove of playing at cards, dice, &c. They maintain a plurality of elders, pastors, or bishops, in each church; and the necessity of the presence of two elders in every act of discipline, and at the administration of the Lord's Supper. In the choice of these elders, want of learning, and engagements in trade, &c. are no sufficient objection; but second marriages disqualify for the office; and they are ordained by prayer and fasting, imposition of hands, and giving the right hand of fellowship. In their discipline they are strict and severe; and think themselves obliged to separate from the communion and worship of all such religious societies as appear to them not to profess the simple truth for their only ground of hope, and who do not walk in obedience to it. We shall only add, that in every church transaction, they esteem unanimity to be absolutely necessary. From this abstract of the account which they have published of their tenets and practices, it does not seem to be probable that their number should be very considerable.

SANDERS. See SAUNDERS.

SANDIVER, a whitish salt, continually cast up from the metal, as it is called, whereof glass is made; and, swimming on its surface, is skimmed off.

Sandiver is also plentifully thrown out in the eruptions of volcanoes; some is of a fine white, and others tinged bluish or yellowish.

Sandiver is said to be detergent, and good for foulnesses of the skin. It is also used by gilders of iron.

SANDIX, a kind of minium, or red-lead, made of ceruse, but much inferior to the true minium.

SANDOMIR, a city, the capital of a palatinate of the same name, in Little Poland, on the Vistula. The Swedes blew up the castle in 1656; and here, in 1659, was a dreadful battle between the Tartars and Russians. It is 84 miles south-east of Cracow. Lat. 49. 26. Long. 20. 10.

SANDORICUM, in botany: A genus of the monogynia order, belonging to the decandria class of plants; and in the natural method ranking under the 23d order, *Tribillatæ*. The calyx is quinque-dentate; the petals five, and linear-shaped: the nectarium has ten dentæ, on which the antheræ grow; the fruit is a drupa, and five in number, each of which has one seed. There is only one species, viz. the indicum, a native of Africa and the East Indies.

SANDPU, or **SANPOO**, the vulgar name of one of the most mighty rivers in the world. The name it generally goes by, and by which it is best known, is that of *Burrampootee*. Of this most majestic body of waters we have the following very animated account in *Maurice's Indian Antiquities*. "An object equally novel and grand now claims our attention; so novel, as not to have been known to Europeans in the real extent of its magnificence before the year 1765, and so awfully grand, that the astonished geographer, thinking the language of prose inadequate to convey his conception,

Sanders

||
Sandpu.

^{Sandpu,}
^{Sandwich,} has had recourse to the more expressive and energetic language of poetry : but

— Scarce the Muse herself
Dares stretch her wing o'er this enormous mass
Of rushing waters ; to whose dread expanse,
Continuous depth, and wond'rous length of course,
Our floods are rills.

“ This stupendous object is the Burrampooter, a word which in Sanscrit signifies *the son of Brahma* ; for no meaner origin could be assigned to so wonderful a progeny. This supreme monarch of Indian rivers derives its source from the opposite side of the same mountain from which the Ganges springs, and taking a bold sweep towards the east, in a line directly opposite to the course of that river, washes the vast country of Tibet, where, by way of distinction, it is denominated *Sanpo*, or *the river*. Winding with a rapid current through Tibet, and, for many a league, amidst dreary deserts and regions remote from the habitations of men, it waters the borders of the territory of Lassa, the residence of the grand Lama ; and then deviating with a cometary irregularity, from an east to a south-east course, the *mighty wanderer* approaches within 200 miles of the western frontiers of the vast empire of China. From this point its more direct path to the ocean lay through the gulph of Siam ; but with a desultory course, peculiar to itself, it suddenly turns to the west through Assam, and enters Bengal on the north-east quarter. Circling round the western point of the Garrow mountains, the Burrampooter now takes a southern direction ; and for 60 miles before it meets the Ganges, its sister in point of origin, but not its rival in point of magnitude, glides majestically along in a stream which is regularly from four to five miles wide, and but for its freshness, Mr Rennel says, might pass for an arm of the sea. About 40 miles from the ocean these mighty rivers unite their streams ; but that gentleman is of opinion that their junction was formerly higher up, and that the accumulation of two such vast bodies of water, scooped out the amazing bed of the Megna lake. Their present conflux is below Luckipoor ; and by that confluence a body of fresh running water is produced, hardly equalled, and not exceeded, either in the old or the new hemisphere. So stupendous is that body of water, that it has formed a gulph of such extent as to contain islands that rival our Isle of Wight in size and fertility ; and with such resistless violence does it rush into the ocean, that in the rainy season the sea itself, or at least its surface, is perfectly fresh for many leagues out.”

SANDWICH, a town of Kent, one of the cinque ports, and which has the title of an earldom. It consists of about 1500 houses, most of them old, and built with wood, though there are a few new ones built with brick and flints. It has three long narrow streets paved, and thirty cross-streets or alleys, with about 6000 inhabitants, but no particular manufactory. The town is walled round, and also fortified with ditches and ramparts ; but the walls are much decayed, on account of the harbour being so choaked up with sand that a ship of 100 tons burthen cannot get in. E. Long. 1. 20. N. Lat. 51. 20.

SANDWICH Islands, a group of islands in the South Sea, lying near New Ireland, were among the last discoveries of captain Cook, who so named them in ho-

nour of the Earl of Sandwich, under whose administration these discoveries were made. They consist of eleven islands, extending in latitude from 18. 54. to 22. 15. N. and in longitude from 150. 54. to 160. 24. W. They are called by the natives, OWHYHEE, MOWEE, RANAI, *Moretoi*, TAHOOROWA, WOAHOO, ATOOI, *Neebeehow*, *Oreehoua*, *Morotinne*, and TAHOORA, all inhabited except the two last. An account of the most remarkable of which will be found in their alphabetical order, in their proper places in this work. The climate of these islands differs very little from that of the West Indies in the same latitude, though perhaps more temperate ; and there are no traces of those violent winds and hurricanes, which render the stormy months in the West Indies so dreadful. There is also more rain at the Sandwich Isles, where the mountainous parts being generally enveloped in a cloud, successive showers fall in the inland parts, with fine weather, and a clear sky, on the sea shore. Hence it is, that few of those inconveniences, to which many tropical countries are subject, either from heat or moisture, are experienced here. The winds, in the winter months, are generally from east-south-east to north-east. The vegetable productions are nearly the same as those of the other islands in this ocean ; but the taro root is here of a superior quality. The bread-fruit trees thrive not in such abundance as in the rich plains of Otaheite, but produce double the quantity of fruit. The sugar-canes are of a very unusual size, some of them measuring eleven inches and a quarter in circumference, and having fourteen feet eatable. There is also a root of a brown colour, shaped like a yam, and from six to ten pounds in weight, the juice of which is very sweet, of a pleasant taste, and is an excellent substitute for sugar. The quadrupeds are confined to the three usual sorts, hogs, dogs, and rats. The fowls are also of the common sort ; and the birds are beautiful and numerous, though not various. Goats, pigs, and European seeds, were left by captain Cook ; but the possession of the goats soon gave rise to a contest between two districts, in which the breed was entirely destroyed. The inhabitants are undoubtedly of the same race that possesses the islands south of the equator ; and in their persons, language, customs, and manners, approach nearer to the New Zealanders than to their less distant neighbours, either of the Society or Friendly Islands. They are in general about the middle size, and well made ; they walk very gracefully, run nimbly, and are capable of bearing very great fatigue. Many of both sexes have fine open countenances ; and the women in particular have good eyes and teeth, with a sweetness and sensibility of look, that render them very engaging. There is one peculiarity, characteristic of every part of these islands, that even in the handsomest faces there is a fulness of the nostril, without any flatness or spreading of the nose. They suffer their beards to grow, and wear their hair after various fashions. The dress of both men and women nearly resemble those of New Zealand, and both sexes wear necklaces of small variegated shells. Tattooing the body is practised by every colony of this nation. The hands and arms of the women are also very neatly marked, and they have the singular custom of tattooing the tip of the tongue. Like the New Zealanders, they have adopted the method of living together in villages, containing from an hundred to two hundred

Sandwich. houses, built pretty closely together, without any order, and having a winding path between them. They are generally flanked, towards the sea, with detached walls, which are meant both for shelter and defence. These walls consist of loose stones, and the inhabitants are very dexterous in shifting them suddenly to such places as the direction of the attack may require. In the sides of the hills, or surrounding eminences, they have also little holes, or caves, the entrance to which is also secured by a fence of the same kind. They serve for places of retreat in cases of extremity, and may be defended by a single person against several assailants. Their houses are of different sizes, some of them being large and commodious, from forty to fifty feet long, and from twenty to thirty broad; while others are mere hovels. The food of the lower class consists principally of fish and vegetables, to which the people of higher rank add the flesh of dogs and hogs. The manner of spending their time admits of little variety. They rise with the sun, and, after enjoying the cool of the evening, retire to rest, a few hours after sun-set. The making of canoes, mats, &c. forms the occupations of the men; the women are employed in manufacturing cloth, and the servants are principally engaged in the plantations and fishing. Their idle hours are filled up with various amusements, such as dancing, boxing, wrestling, &c. Their agriculture and navigation bear a great resemblance to those of the South-sea islands. Their plantations, which are spread over the whole sea-coast, consist of the taro, or eddy-root, and sweet potatoes, with plants of the cloth-trees set in rows. The bottoms of their canoes are of a single piece of wood, hollowed out to the thickness of an inch, and brought to a point at each end. The sides consist of three boards, each about an inch thick, neatly fitted and lashed to the bottom part. Some of their double canoes measure 70 feet in length, three and a half in depth, and twelve in breadth. Their cordage, fish-hooks, and fishing-tackle, differ but little from those of the other islands. Among their arts must not be forgotten that of making salt, which they have in great abundance, and of a good quality. Their instruments of war are spears, daggers, clubs, and slings; and for defensive armour they wear strong mats, which are not easily penetrated by such weapons as theirs. As the islands are not united under one sovereign, wars are frequent among them, which, no doubt, contribute greatly to reduce the number of inhabitants, which, according to the proportion assigned to each island, does not exceed 400,000. The same system of subordination prevails here as at the other islands, the same absolute authority on the part of the chiefs, and the same unresisting submission on the part of the people. The government is likewise monarchical and hereditary. At Owhyhee there is a regular society of priests living by themselves, and distinct in all respects from the rest of the people. Human sacrifices are here frequent; not only at the commencement of a war, or any signal enterprise, but the death of every considerable chief calls for a repetition of these horrid rites. Notwithstanding the irreparable loss in the death of captain Cook, who was here murdered through sudden resentment and violence, they are acknowledged to be of the most mild and affectionate disposition. They live in the utmost harmony and friendship with each other; and in hospitality to strangers they are not exceeded

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even by the inhabitants of the Friendly Islands. Their natural capacity seems, in no respect, below the common standard of mankind; and their improvements in agriculture, and the perfection of their manufactures, are certainly adequate to the circumstances of their situation, and the natural advantages which they enjoy.

SANDYS (Sir Edwin), second son of Dr Edwin Sandys archbishop of York, was born about 1561, and educated at Oxford under Mr Richard Hooker, author of the Ecclesiastical Polity. In 1581 he was collated to a prebend in the cathedral of York. He travelled into foreign countries; and, upon his return, grew famous for learning, prudence, and virtue. While he was at Paris, he drew up a tract, published under the title of *Europa Speculum*. In 1602, he resigned his prebend; and, the year following, was knighted by king James I. who employed him in several important affairs. He was dexterous in any great employment, and a good patriot. However, opposing the court with vigour in the parliament held in 1621, he, with Mr Selden, was committed to custody for a month. He died in 1629, having bequeathed 1500l. to the university of Oxford, for the endowment of a metaphysical lecture.

SANDYS (George), brother of the foregoing Sir Edwin, and youngest son of archbishop Sandys, was born in 1577. He was a most accomplished gentleman; travelled over several parts of Europe and the East; and published a relation of his journey in folio, in 1615. He made an elegant translation of Ovid's *Metamorphoses*; and composed some poetical pieces of his own, that were greatly admired in the times of their being written. He also paraphrased the Psalms; and has left behind him a Translation, with Notes, of one Sacred Drama written originally by Grotius, under the title of *Christus Patiens*; on which, and *Adamus Exul*, and *Masenius*, is founded Lauder's impudent charge of plagiarism against our immortal Milton. Our author became one of the privy chamber to Charles I. and died in 1643.

SAN FERNANDO, near the entrance of the Golfo Dolce, in 15 degrees 18 minutes north latitude, has lately been fortified by the Spaniards, with an intent to curb the Musquito-men, logwood-cutters, and bay-men. It is a very good harbour, with safe anchorage from the north and east winds, in eight fathoms water.

SANGUIFICATION, in the animal œconomy, the conversion of the chyle into true blood. See **BLOOD**.

SANGUINARIA, **BLOOD-WORT**, in botany: A genus of the monogynia order, belonging to the polyandria class of plants; and in the natural method ranking under the 27th order, *Rhoeada*. The corolla is octopetalous: the calyx diphyllous; the siliqua ovate and unilocular. There is only one species, viz. the canadensis, a native of the northern parts of America, where it grows plentifully in the woods; and in the spring, before the leaves of the trees come out, the surface of the ground is in many places covered with the flowers, which have some resemblance to our wood anemone; but they have short naked pedicles, each supporting one flower at top. Some of these flowers will have 10 or 12 petals, so that they appear to have a double range of leaves, which has occasioned their being termed *double flowers*; but this is only accidental, the same

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Sanguinaria.

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Sanhedrim.

roots in different years producing different flowers.—The plant can bear the open air in this country, but should be placed in a loose soil and sheltered situation, not too much exposed to the sun. It is propagated by the roots; which may be taken up and parted, in September, every other year. The Indians paint themselves yellow with the juice of these plants.

SANGUISORBA, GREATER WILD BURNET, in botany: A genus of the monogynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the 54th order, *Miscellanea*. The calyx is diphyllous; the germen situated betwixt the calyx and corolla. The most remarkable species is the officinalis, with oval spikes. This grows naturally in moist meadows in many parts of Britain. The stalks rise from two to three feet high, branching towards the top; and are terminated by thick oval spikes of flowers of a greyish brown colour, which are divided into four segments almost to the bottom. These are succeeded by four oblong cornered seeds. The leaves of this sort are composed of five or six pair of lobes placed along a midrib, terminated by an odd one. These are heart-shaped, deeply fawed on their edges, and a little downy on their under sides. The cultivation of this plant has been greatly recommended as food to cattle. See AGRICULTURE, n° 48, &c.

SANHEDRIM, or **SANHEDRIN**, from the Greek word *συνεδριον*, which signifies a council or assembly of persons sitting together, was the name whereby the Jews called the great council of the nation, assembled in an apartment of the temple of Jerusalem to determine the most important affairs both of their church and state. This council consisted of seventy senators. The room they met in was a rotunda, half of which was built without the temple, and half within; that is, one semicircle was within the compass of the temple; the other semicircle, they tell us, was built without, for the senators to sit in; it being unlawful for any one to sit down in the temple. The Nasi, or prince of the sanhedrim, sat upon a throne at the end of the hall, having his deputy at his right hand, and his sub-deputy on his left. The other senators were ranged in order on each side.

The rabbins pretend, that the sanhedrim has always subsisted in their nation from the time of Moses down to the destruction of the temple by the Romans. They date the establishment of it from what happened in the wilderness, some time after the people departed from Sinai (Numb. xi. 16.), in the year of the world 2514. Moses, being discouraged by the continual murmurings of the Israelites, addressed himself to God, and desired to be relieved, at least, from some part of the burden of the government. Then the Lord said to him, "Gather unto me 70 men of the elders of Israel, whom thou knowest to be the elders of the people, and officers over them; and bring them unto the tabernacle of the congregation, that they may stand there with thee: And I will come down and talk with thee there; and I will take of the spirit which is upon thee, and will put it upon them; and they shall bear the burden of the people with thee, that thou bear it not thyself alone." The Lord, therefore, poured out his spirit upon these men, who began at that time to prophecy, and have not ceased from that time. The sanhedrim was composed of 70 counsellors, or rather 72, six out

of each tribe; and Moses, as president, made up the Sanhedrim number 73. To prove the uninterrupted succession of the judges of the sanhedrim, there is nothing unattempted by the partisans of this opinion. They find a proof where others cannot so much as perceive any appearance or shadow of it. Grotius may be consulted in many places of his Commentaries, and in his first book *De jure belli & pacis*, c. 3. art. 20. and Selden *de Synedriis veterum Hebræorum*. Also, Calmet's Dissertation concerning the polity of the ancient Hebrews, printed before his Comment upon the Book of Numbers.

As to the personal qualifications of the judges of this bench, their birth was to be untainted. They were often taken from the race of the priests or Levites, or out of the number of the inferior judges, or from the lesser sanhedrim, which consisted only of 23 judges.—They were to be skilful in the law, as well traditional as written. They were obliged to study magic, divination, fortune-telling, physic, astrology, arithmetic, and languages. The Jews say, they were to know to the number of 70 tongues; that is, they were to know all the tongues, for the Hebrews acknowledged but 70 in all, and perhaps this is too great a number. Eunuchs were excluded from the sanhedrim, because of their cruelty, usurers, decrepid persons, players at games of chance, such as had any bodily deformities, those that had brought up pigeons to decoy others to their pigeon-houses, and those that made a gain of their fruits in the sabbatical year. Some also exclude the high-priest and the king, because of their too great power; but others will have it, that the kings always presided in the sanhedrim, while there were any kings in Israel.—Lastly, it was required, that the members of the sanhedrim should be of a mature age, a handsome person, and of considerable fortune. We speak now according to the notions of the rabbins, without pretending to warrant their opinions.

The authority of the great sanhedrim was vastly extensive. This council decided such causes as were brought before it by way of appeal from the inferior courts. The king, the high-priest, the prophets, were under its jurisdiction. If the king offended against the law, for example, if he married above 18 wives, if he kept too many horses, if he hoarded up too much gold and silver, the sanhedrim had him stripped and whipped in their presence. But whipping, they say, among the Hebrews was not at all ignominious; and the king bore this correction by way of penance, and himself made choice of the person that was to exercise this discipline over him. Also, the general affairs of the nation were brought before the sanhedrim. The right of judging in capital cases belonged to this court, and this sentence could not be pronounced in any other place, but in the hall called *Laschat-baggazith*, or the hall paved with stones, supposed by some to be the *Αἰθυσια*, or pavement, mentioned in John xix. 13. From whence it came to pass, that the Jews were forced to quit this hall when the power of life and death was taken out of their hands, 40 years before the destruction of their temple, and three years before the death of Jesus Christ. In the time of Moses this council was held at the door of the tabernacle of the testimony. As soon as the people were in possession of the land of promise, the sanhedrim followed the tabernacle. It was kept successively

Sanhedrim. fively at Gilgal, at Shiloh, at Kirjath-jearim, at Nob, at Gibeon in the house of Obed-edom; and lastly, it was settled at Jerusalem, till the Babylonish captivity. During the captivity it was kept up at Babylon. After the return from Babylon, it continued at Jerusalem to the time of the Sicarii, or Assassins. Then finding that these profligate wretches, whose number increased every day, sometimes escaped punishment by the favour of the president or judges, it was removed to Hanoth, which were certain abodes situated, as the rabbins tell us, upon the mountain of the temple. From thence they came down into the city of Jerusalem, withdrawing themselves by degrees from the temple. Afterwards they removed to Jamnia, thence to Jericho, to Uzzah, to Shepharvaim, to Bethsanim, to Sephoris, last of all to Tiberias, where they continued to the time of their utter extinction. And this is the account the Jews themselves give us of the sanhedrim.

But the learned do not agree with them in all this. Father Petau fixes the beginning of the sanhedrim not till Gabinius was governor of Judea, who, according to Josephus, erected tribunals in the five principal cities of Judea; at Jerusalem, at Gadara, at Amathus, at Jericho, and at Sephora or Sephoris, a city of Galilee. Grotius places the origin of the sanhedrim under Moses, as the rabbins do; but he makes it determine at the beginning of Herod's reign. Mr Basnage at first thought that the sanhedrim began under Gabinius; but afterwards he places it under Judas Maccabæus, or under his brother Jonathan. We see indeed, under Jonathan Maccabæus, (1 Macc. xii. 6.), in the year 3860, that the senate with the high-priest sent an embassy to the Romans. The rabbins say, that Alexander Janneus, king of the Jews, of the race of the Asmoneans, appeared before the sanhedrim, and claimed a right of sitting there, whether the senators would or not. Josephus informs us, that when Herod was but yet governor of Galilee, he was summoned before the senate, where he appeared. It must be therefore acknowledged, that the sanhedrim was in being before the reign of Herod. It was in being afterwards, as we find from the Gospel and from the Acts. Jesus Christ in St Matthew (v. 22.) distinguishes two tribunals.—“Whosoever is angry with his brother without a cause shall be in danger of the judgment.” This, they say, is the tribunal of the 23 judges. “And whosoever shall say to his brother Racha, shall be in danger of the council;” that is, of the great sanhedrim, which had the right of life and death, at least generally, and before this right was taken away by the Romans. Some think that the jurisdiction of the council of 23 extended to life and death also; but it is certain that the sanhedrim was superior to this council. See also Mark xiii. 9. xiv. 55. xv. 1.; Luke xxii. 52, 66.; John xi. 47.; Acts iv. 15. v. 21. where mention is made of the synedrion.

From all this it may be concluded, that the origin of the sanhedrim is by no means to be depended upon; for the council of the 70 elders established by Moses was not what the Hebrews understand by the name of sanhedrim. Besides, we cannot perceive that this establishment subsisted either under Joshua, the Judges, or the kings. We find nothing of it after the captivity, till the time of Jonathan Maccabæus. The tribunals erected by Gabinius were still very different from the

sanhedrim. This was the only one of its kind, and fixed at Jerusalem; whereas Gabinius established five at five different cities, which tribunals do not appear to be subordinate one to another. Lastly, it is certain that this senate was in being in the time of Jesus Christ, and when St Matthew, Mark, Luke, and John, wrote their gospels, since they are mentioned in their writings; but the Jews inform us themselves that they had no longer then the power of life and death (John xviii. 31).

SANJACKS, a people inhabiting the Curdistan, or Persian mountains, subsisting chiefly by plunder, and the scanty pittance afforded by their own mountainous country. “They were much reduced (says Mr Ives) by the late bashaw Achmet of Bagdad, who pursued them in person to their subterranean retreats, and destroyed many by the sword, and carried off great numbers of prisoners, who were sold for slaves.” Notwithstanding this check, in the year 1758, they were again become so daring that they would attack caravans of 700 men, and sometimes carry all off. They are mostly professed worshippers of the devil. See ZAAVE.

SAN JUAN DE PUERTO RICO. The harbour is so spacious, that the largest ships may lie with great safety. On the west side of this city is the Castillo del Morro, a strong citadel, which commands and defends it, while the mouth of the harbour is protected by the El Convelo, a large and well fortified castle. In 1595 Sir Francis Drake burnt all the ships in the harbour; but finding it impossible to keep the place, without abandoning his other designs, he declined it. A few years after the Earl of Cumberland reduced the island; but losing 400 or 500 men in a month, by a contagious disease, he was glad to depart. In 1615, the Dutch sent a strong fleet against it with little success: They only took and plundered the city, but were unable to reduce the castle with its forts.

SANICULA, **SANICLE**, or *Self-heal*, in botany: A genus of the digynia order, belonging to the pentandria class of plants; and in the natural method ranking under the 45th order, *Umbellatæ*. The umbels are close together, almost in a round head; the fruit is scabrous; the flowers of the disk abortive. There is but one species, viz. the europæa, found in many parts both of Scotland and England. This plant was long celebrated for its healing virtues both internally and externally; but it is now totally disregarded.

SANIDIUM, in natural history, the name of a genus of fossils of the class of the selenitæ, but neither of the rhomboidal nor columnar kinds, nor any other way distinguishable by its external figure; being made up of several plain flat plates.

SANIES, in medicine, a ferous putrid matter, issuing from wounds. It differs from pus, which is thicker and whiter.

SANNAZARIUS (James), in Latin *Adrius Cin-cenis Sannazarius*, a celebrated Latin and Italian poet, born at Naples in 1458. He by his wit ingratiated himself into the favour of king Frederic; and, when that prince was dethroned, attended him into France, where he staid with him till his death, which happened in 1504. Sannazarius then returned into Italy, where he applied himself to polite literature, and particularly to Latin and Italian poetry. His gay and facetious humour made him sought for by all companies; but he

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was so afflicted at the news that Philibert prince of Orange, general of the emperor's army, had demolished his country-house, that it threw him into an illness, of which he died in 1530. It is said, that being informed a few days before his death, that the prince of Orange was killed in battle, he cried out, "I shall die contented, since Mars has punished this barbarous enemy of the Muses." He wrote a great number of Italian and Latin poems: among those in Latin, his *De Partu Virginis*, and Eclogues, are chiefly esteemed; and the most celebrated of his Italian pieces is his *Arcadia*.

SANTA CRUZ a large island in the South Sea, and one of the most considerable of those of Solomon. It is 18 leagues in length, and from three to four in breadth. In 1643, it was inhabited by Dutch and English. Their rivalry in trade soon made them enemies to each other. In 1646, after an obstinate and bloody engagement, the Dutch were beat, and obliged to quit a spot from which they had formed great expectations. The conquerors were employed in securing the consequences of their victory, when, in 1650, they were attacked and driven out in their turn by 1200 Spaniards, who arrived there in five ships. The triumph of these lasted but a few months. The remains of that numerous body, which were left for the defence of the island, surrendered without resistance to 160 French, who had embarked in 1651, from St Christopher's, to make themselves masters of the island.

These new inhabitants lost no time in making themselves acquainted with a country so much disputed. On a soil, in other respects excellent, they found only one river of a moderate size, which, gliding gently almost on a level with the sea through a flat country, furnished only a brackish water. Two or three springs, which they found in the innermost parts of the island, made but feeble amends for this defect. The wells were for the most part dry. The construction of reservoirs required time. Nor was the climate more inviting to the new inhabitants. The island being flat, and covered with old trees, scarce afforded an opportunity for the winds to carry off the poisonous vapours with which its morasses clogged the atmosphere. There was but one remedy for this inconvenience; which was to burn the woods. The French set fire to them without delay; and, getting on board their ships, became spectators from the sea, for several months, of the conflagration they had raised in the island. As soon as the flames were extinguished, they went on shore again.

They found the soil fertile beyond belief. Tobacco, cotton, arnotto, indigo, and sugar, flourished equally in it. So rapid was the progress of this colony, that in 11 years from its commencement there were upon it 822 white persons, with a proportionable number of slaves. It was rapidly advancing to prosperity when such obstacles were thrown in the way of its activity as made it decline again. This decay was as sudden as its rise. In 1696, there were no more than 147 men, with their wives and children, and 623 blacks remaining; and these were transported from hence to St Domingo.

Some obscure individuals, some writers unacquainted with the views of government, with their secret negotiations, with the character of their ministers, with the

interests of the protectors and the protected, who flatter themselves that they can discern the reason of events amongst a multitude of important or frivolous causes, which may have equally occasioned them; who do not conceive, that among all these causes the most natural may possibly be the farthest from the truth; who after having read the news, or journal of the day, with profound attention, decide as peremptorily as if they had been placed all their lifetime at the helm of the state, and had assisted at the council of kings; who are never more deceived than in those circumstances in which they display some share of penetration; writers as absurd in the praise as in the blame which they bestow upon nations, in the favourable or unfavourable opinion they form of ministerial operations: these idle dreamers, in a word, who think they are persons of importance, because their attention is always engaged on matters of consequence, being convinced that courts are always governed in their decisions by the most comprehensive views of profound policy, have supposed that the court of Versailles had neglected Santa Cruz, merely because they wished to abandon the small islands, in order to unite all their strength, industry, and population, in the large ones; but this is a mistaken notion. This determination arose from the farmers of the revenue, who found that the contraband trade of Santa Cruz with St Thomas was detrimental to their interests. The spirit of finance hath in all times been injurious to commerce; it hath destroyed the source from whence it sprang. Santa Cruz continued without inhabitants, and without cultivation, till 1733, when it was sold by France to Denmark for 30,750 l. Soon after the Danes built there the fortrefs of Christianstadt. Then it was that this northern power seemed likely to take deep root in America. Unfortunately, she laid her plantations under the yoke of exclusive privileges. Industrious people of all sects, particularly Moravians, strove in vain to overcome this great difficulty. Many attempts were made to reconcile the interests of the colonists, and their oppressors, but without success. The two parties kept up a continual struggle of animosity, not of industry. At length the government, with a moderation not to be expected from its constitution, purchased, in 1754, the privileges and effects of the company. The price was fixed at L. 412,500, part of which was paid in ready money, and the remainder in bills upon the treasury, bearing interest. From this time the navigation to the islands was opened to all the subjects of the Danish dominions. Of 345 plantations, which were seen at Santa Cruz, 150 were covered with sugar canes, and every habitation is limited to 3000 Danish feet in length, and 2000 in breadth. It is inhabited by 2136 white men, by 22,244 slaves, and by 155 freedmen.

SANTA CRUZ, in Teneriff. See TENERIFF.

SANTA CRUZ, a town of Africa, on the coast of Barbary, and in the province of Suez and kingdom of Morocco, with a harbour and a fort. The Moors took it from the Portuguese in 1536. It is seated at the extremity of Mount Atlas, on the Cape Aguer. W. Long. 9. 55. N. Lat. 36. 30.

SANTA CRUZ DE LA SIERRA, a town of South America, and capital of a province of that name in Peru, and in the audience of Los Charcas, with a bishop's see.

Santa.

Santa, fee. It is seated at the foot of a mountain, in a country abounding in good fruits, on the river Guapy. **Santalum.** W. Long. 59. 35. S. Lat. 20. 40.

SANTA Fe de Bogota, a town of South America, and capital of New Granada, with an archbishop's see, a supreme court of justice, and an university.

The city is situated at the foot of a steep and cold mountain, at the entrance of a vast and superb plain. In 1774 it contained 1770 houses, 3246 families, and 16,233 inhabitants. Population must necessarily increase there, since it is the seat of government, the place where the coin is stricken, the staple of trade; and lastly, since it is the residence of an archbishop, whose immediate jurisdiction extends over 31 Spanish villages, which are called towns; over 195 Indian colonies, anciently subdued; and over 28 missions, established in modern times. This archbishop hath likewise, as metropolitan, a sort of inspection over the dioceses of Quito, of Panama, of Caraccas, of St. Martha, and of Carthagena. It is by this last place, though at the distance of 100 leagues, and by the river Magdalena, that Santa Fe keeps up its communication with Europe. There are silver mines in the mountains about the city. W. Long. 60. 5. N. Lat. 3. 58.

SANTALUM, in botany: A genus of the monogynia order, belonging to the octandria class of plants; and in the natural method ranking with those of which the order is doubtful. The calyx is superior; the corolla monopetalous; the stamina placed in the tube; the stigma is simple; the fruit a berry.

The santalum, or sanders, grows to the size of a walnut-tree. Its leaves are entire, oval, and placed opposite to each other. Its flower is of one single piece, charged with eight stamina, and supported upon the pistil, which becomes an insipid berry, resembling in form that of the laurel. Its wood is white in the circumference, and yellow in the centre when the tree is old. This difference of colour constitutes two kinds of sanders, both employed for the same purposes, and having equally a bitter taste, and an aromatic smell. With the powder of this wood a paste is prepared, with which the Chinese, Indians, Persians, Arabians, and Turks, anoint their bodies. It is likewise burnt in their houses, and yields a fragrant and wholesome smell. The greatest quantity of this wood, to which a sharp and attenuating virtue is ascribed, remains in India. The red sanders, though in less estimation, and less generally used, is sent by preference into Europe. This is the produce of a different tree, which is common on the coast of Coromandel. Some travellers confound it with the wood of Caliatour, which is used in dyeing.

The santalum album, or white sanders, is brought from the East Indies in billets about the thickness of a man's leg, of a pale whitish colour. It is that part of the yellow sanders wood which lies next the bark. Great part of it, as met with in the shops, has no smell or taste, nor any sensible quality that can recommend it to the notice of the physician.

The santalum album, or yellow sanders, is the interior part of the wood of the same tree which furnishes the former, is of a pale yellowish colour, of a pleasant smell, and a bitterish aromatic taste, accompanied with an agreeable kind of pungency. This elegant wood might undoubtedly be applied to valuable medical pur-

poses, though at present very rarely used. Distilled with water, it yields a fragrant essential oil, which thickens in the cold into the consistence of a balsam. Digested in pure spirit, it imparts a rich yellow tincture; which being committed to distillation, the spirit arises without bringing over any thing considerable of the flavour of the sanders. The residuum contains the virtues of six times its weight of the wood. Hoffman looks upon this extract as a medicine of similar virtues to ambergris; and recommends it as an excellent restorative in great debilities.

SANTAREN, a handsome town of Portugal in Estremadura, seated on a mountain near the river Tago, in a country very fertile in wheat, wine, and oil. They get in their harvest here two months after they have sown their corn. It was taken from the Moors in 1447. W. Long. 7. 45. N. Lat. 39. 12.

SANTAUGUSTINE. See **AUGUSTINE.**

SANTEN, a town of Germany, in the circle of Westphalia, and in the duchy of Cleves. It has a handsome church belonging to the Roman Catholics, wherein is an image of the Virgin Mary, which they pretend performs a great many miracles. Here the fine walks begin that run as far as Wesel, from which it is five miles distant to the north-west. E. Long. 6. 33. N. Lat. 51. 38.

SANTERRE, a small territory of France, in Picardy; bounded on the north by Cambresis, on the east by Vermandois, on the west by Amienois, and on the south by the river Somme. It is very fertile, and the capital town is Peronne.

SANTEUIL, or rather **SANTEUL** (John Baptist de), in Latin *Santolius Victorinus*, an excellent Latin poet, was born at Paris in 1630. Having finished his studies in Louis the Great's college, he applied himself entirely to poetry, and celebrated in his verse the praises of several great men; by which he acquired universal applause. He enriched Paris with a great number of inscriptions, which are to be seen on the public fountains, and the monuments consecrated to posterity. At length, some new hymns being to be composed for the Breviary of Paris, Claude Santeuil his brother, and M. Bossuet, persuaded him to undertake that work; and he succeeded in it with the greatest applause. On which the order of Clugny desiring him to compose some for their Breviary, he complied with their request; and that order, out of gratitude, granted him letters of filiation, with an annual pension. Santeuil was caressed by all the learned men of his time; and had for his admirers the two princes of Condé, the father and son, from whom he frequently received favours. Louis XIV. also gave him a proof of his esteem, by bestowing a pension upon him. He attended the duke of Bourbon to Dijon, when that prince went thither in order to hold the states of Burgundy; and died there in 1697, as he was preparing to return to Paris. Besides his Latin hymns, he wrote a great number of Latin poems, which have all the fire and marks of genius discoverable in the works of great poets.

To Santeuil we are indebted for many fine church-hymns, as above-mentioned. Santeuil read the verses he made for the inhabitants of heaven with all the agitations of a demoniac. Despreaux said he was the devil

Santaren
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Santeuil.

Santeuil devil whom God compelled to praise saints. He was among the number of poets whose genius was as impetuous as his muse was decent.

Santolina

La Bruyere has painted the character of this singular and truly original poet in the most lively colours. "Image a man of great facility of temper, complaisant and docile, in an instant violent, choleric, passionate, and capricious. A man simple, credulous, playful, volatile, puerile; in a word, a child in gray hairs; but let him collect himself, or rather call forth his interior genius, I venture to say, without his knowledge or privacy, what sallies! what elevation! what images! what latinity! Do you speak of one and the same person, you will ask? Yes, of the same; of Theodas, and of him alone. He shrieks, he jumps, he rolls upon the ground, he roars, he storms; and in the midst of this tempest, a flame issues that shines, that rejoices. Without a figure, he rattles like a fool, and thinks like a wise man. He utters truths in a ridiculous way; and, in an idiotic manner, rational and sensible things. It is astonishing to find good sense disclose itself from the bosom of buffoonery, accompanied with grimaces and contortions. What shall I say more? He does and he says better than he knows. These are like two souls that are unacquainted with each other, which have each their turn and separate functions. A feature would be wanting in this extraordinary portrait, if I omitted saying, that he has at once an insatiable thirst for praise, ready to throw himself at the mercy of the critics, and at the bottom so docile as to profit by their censure. I begin to persuade myself that I have been drawing the portraits of two different persons: it would not be impossible to find a third in Theodas; for he is a good man, a pleasant man, an excellent man."

This poet ought not to be confounded with *Claude de Santeuil*, his brother, a learned ecclesiastic, who also wrote several hymns in the Paris Breviary under the name of *Santolius Magliaricus*, a name given him from his having lived a long time in the seminary of St Magliore at Paris, in quality of secular ecclesiastic. He was esteemed not only for his poetical abilities, but also for his profound erudition and his exemplary piety. He died at Paris in 1684, aged 57. He wrote several other pieces of poetry, besides his hymns, which are printed with his brother's works.

SANTILLANE, a sea-port town of Spain, in the province of Asturias, of which it is the capital. It is seated on the sea-coast, 55 miles east of Oviedo, and 200 north-west of Madrid. W. Long. 4. 33. N. Lat. 43. 30.

SANTOLINA, LAVENDER-COTTON, in botany: A genus of the order of polygamia æqualis, belonging to the syngenesia class of plants; and in the natural method ranking under the 49th order, *Compositæ*. The receptacle is paleaceous; there is no pappus; the calyx imbricated and hemispherical.

The most remarkable species are, 1. The *chamæcyparifus*, or common lavender-cotton, which has been long known in the English gardens; it was formerly titled *abrotanum femina*, or female southernwood, and by the corruption of words was called *brotany* by the market-people: it grows naturally in Spain, Italy, and the warm parts of Europe. This hath a ligneous stalk, dividing into many branches, garnished with slender ho-

ry leaves, that are four ways indented, and have a rank, strong, odour when handled. The branches are terminated by a single flower, composed of many hermaphrodite florets, which are fistular, cut into five parts at the top, of a sulphur colour, and are included in one common scaly empalement, having no borders or rays. These are succeeded by small, oblong, striated seeds, which are separated by scaly chaff, and ripen in the empalement; the plants love a dry soil and a sheltered situation. 2. The *villosa*, with woolly leaves, has a shrubby stalk, which branches out like the former, but the plants seldom grow so tall. The branches are garnished very closely below with leaves shaped like those of the other sort, but shorter, thicker, and whiter; the flowers are much larger, and the brims of the florets are more reflexed; they are of a deeper sulphur colour than the other. It grows naturally in Spain. 3. The *decumbens*, with linear leaves, is of lower stature than either of the former, seldom rising more than 15 or 16 inches high. The branches spread horizontally near the ground, and are garnished with shorter leaves than either of the former, which are hoary and finely indented; the stalks are terminated by single flowers, of a bright yellow colour, which are larger than those of the first sort. 4. The *virens*, with very long linear leaves, rises higher than either of the former. The branches are more diffused; they are slender, smooth, and garnished with very narrow long leaves, which are of a deep green colour, but two ways indented; the stalks are slender, naked towards the top, and terminated by single flowers of a gold colour. 5. The *rosmarinifolia*, with linear entire leaves, hath shrubby stalks, which rise about three feet high, sending out long slender branches, garnished with single linear leaves of a pale-green colour. The stalks are terminated by large, single, globular flowers, of a pale sulphur colour. 6. The *minor*, with linear obtuse leaves, is somewhat like the fifth; but the branches are shorter, thicker, and closer garnished with leaves, which come out in clusters. The flower-stalks are sparsely disposed, and have leaves to their top; the flowers are small, and of a yellow colour. 7. The *chamæmelifolia*, with obtuse woolly leaves, hath shrubby stalks, which rise three feet high, garnished with broader leaves than either of the former, whose indentures are looser, but double; they are hoary, and when bruised have an odour like chamomile. The leaves are placed pretty far asunder, and the stalks are garnished with them to the top. The stalks are divided likewise at the top into two or three foot-stalks, each sustaining one pretty large sulphur-coloured flower.

All these plants may be cultivated so as to become ornaments to a garden, particularly in small bosquets of ever-green shrubs, where, if they are artfully intermixed with other plants of the same growth, and placed in the front line, they will make an agreeable variety; especially if care be taken to trim them twice in a summer, to keep them within bounds, otherwise their branches are apt to straggle, and in wet weather to be borne down and displaced, which renders them unsightly; but when they are kept in order, their hoary and different-coloured leaves will have a pretty effect in such plantations.—They may be propagated by planting slips or cuttings during the spring, in a

Santorini

Sap.

border of light fresh earth, but must be watered and shaded in hot dry weather, until they have taken root; after which they will require no farther care but to keep them clean from weeds till autumn, when they should be transplanted where they are designed to remain: but if the ground is not ready by that time to receive them, it will be proper to let them remain in the border until spring; for if they are transplanted late in autumn, they are liable to be destroyed by cold in winter.

SANTORINI, an island of the Archipelago, to the north of Candia, and to the south-west of Naphio. It is eight miles in length, and near as much in breadth, and almost covered with pumice-stone, whence the soil in general must be dry and barren; it is, however, greatly improved by the labour and industry of the inhabitants, who have turned it into a garden. It affords a great deal of barley, plenty of cotton, and large quantities of wine. Fruit is scarce, except figs; and they have neither oil nor wood. The inhabitants are all Greeks, and are about 10,000 in number. Pyrgos is the capital town, and there are several little towns and villages. They have but one spring in the island, for which reason they preserve the rain-water in cisterns. Though subject to the Turks, they choose their own magistrates. E. Long. 25.5. N. Lat. 39. 10.

SANZIO (Raphael). See **RAPHAEL**.

SAO, a territory, called a kingdom, of Africa, on the gold-coast of Guinea, hardly two miles in length along the shore. It produces abundance of Indian corn, yams, potatoes, palm-wine, and oil. The inhabitants are very treacherous, and there is no dealing with them without a great deal of caution. It contains several villages, of which Sabo is the principal; and the Dutch have a fort here called *Nassau*.

SAONE, a considerable river of France, which has its source in mount Vosgue, near Darney; runs through the Franche Comte, Burgundy, Beaujolois; and falls into the Rhone at Lyons. It passes by Gray, Chalons, and Mafcon.

SAP, a juice that circulates in trees and plants, arising from the moisture of the earth. The motion of sap in plants is a fact never doubted by the writers on vegetable statics; but as we have already remarked in the article **PLANT**, p. 5. the opinions on this head have neither been uniform nor consistent. Dr Walker has ascertained these points by numerous experiments on trees, especially on the birch, which show, that the bleeding sap begins to flow at the root, to ascend slowly upward; and that, as it ascends, the tree bleeds successively to the utmost extremities. One year the sap required 43 days to ascend 20 feet in the trunk of a birch, that is, on an average, nearly six inches each day; another year, in the same tree, the sap ascended to the same height in 33 days, or about nine inches each day. In none of the experiments here related could any sap be perceived to arise either by the pith or the bark; the whole sap was conveyed by the wood, and between the wood and the bark; it appears also, that it moves both in the substance of the ligneous circles and in the veins by which they are separated; that in both it is in an ascending state; that it moves more expeditiously in the veins than in the circles themselves, and more freely in young than in old circles, and con-

sequently more freely in the exterior than in the interior parts of the trunk.

The cause of the ascent of the sap is a curious and important point in the history of vegetation; it remains, however, still enveloped in darkness. Dr Walker's experiments indeed show, on many occasions, that heat is the prime agent in producing this effect: the incisions on the birch ran freely in the day-time, especially during sun-shine, but dried up regularly as the cold of the evening advanced. With a few exceptions, Dr Walker generally found the ascent of the sap constantly promoted by heat, and retarded and even stopped by cold; yet the manner in which heat and cold produce these effects does not appear. It is probable that other causes co-operate. A thorough knowledge of the structure of the plant might perhaps explain the phenomenon.

The principal fact which Dr Walker has ascertained is, that the sap, before the leaves of the tree appear, continually rises; what course it takes after that period is yet undetermined. The Doctor says, that from a few trials which he has made, he has been led to suspect, that, while the tree is in leaf, its sap observes a different course.

SAP, in sieges, is a trench, or an approach made under cover of 10 or 12 feet broad, when the besiegers come near the place, and the fire from the garrison grows so dangerous that they are not able to approach uncovered.—There are several sorts of saps; the single, which has only a single parapet; the double, having one on each side; and the flying, made with gabions, &c. In all saps traverses are left to cover the men.

SAPHAN, or **ASHKOKO**, in zoology; a genus of the mammalia class of animals, and of the order of glires. The generic characters are, two broad and distant fore-teeth above; four contiguous, broad, flat, notched, fore-teeth below; and four large grinders on each side in both jaws. The fore-feet have four toes; the hind-feet only three. There is no tail; and the clavicles are wanting.

1. The capensis, or cape ashkoko, "has flat nails on all the toes, except one toe of each hind foot, which is armed with a sharp-pointed claw. It inhabits the Cape of Good Hope.—This animal is about the size of a rabbit, being about 15 inches long; the head is short, with the back part very thick, and the snout very short and blunt; the eyes are small; the ears are oval and open, brown, woolly, and half hid in the fur; the legs are very short, the upper joints of both being concealed beneath the skin; the hind legs are rather longer than the fore; the feet are large, black, and naked: The body is short, thick, and contracted, with a prominent belly, and is covered with a soft woolly fur of a yellowish brown or greyish colour, hoary at the roots; the sides are of a dirty whitish grey; and along the back is a brownish stripe; this fur is interspersed with longer and coarser black hairs, and a few very coarse long bristles. The fore-feet have four short, scarce divided, thick toes, furnished with flat nails; the two outer toes of the hind-feet are similar, but the inner toe is longer, and has a sharp claw. This animal has a sharp voice, and acute sense of hearing; its gait is very wavering and unsteady, owing to the shortness of its thighs and unequal length of the hind and fore legs; notwithstanding of which it is very active, and moves by leaps; it is very cleanly, lives

Sap.
Saphan.

Saphan,
Sapindus.

lives entirely on vegetable food, drinks little, is fond of heat, and burrows in the ground. In manners and general appearance this animal resembles the marmot and cavy; in the conformation of its toes, it has some analogy with the maucauco; but from the circumstances of the teeth, it cannot be ranked with the last; and the peculiarity of the feet has caused Dr Gmelin to separate it from both of the former."

2. The syriacus, or Syrian ashkoko (Bruce, Schreber), "has soft tender nails on all the toes. It inhabits Syria and Ethiopia.—The body of this species is more lengthened than that of the former, and the snout more oblong. The fur is of a reddish grey colour, like that of the wild rabbit, the throat, breast, and belly, being white; all over the body a number of long, strong, and polished hairs, are scattered among the fur: The body and head of the individual described by Mr Bruce measured 17 inches; the ears are broad, open, and rounded; each side of the mouth is garnished with long whiskers: in walking, which is performed creeping low with the belly almost touching the ground, the hind feet are used as far as the heel; all the toes have short, broad, weak, flat nails, except the inner toe of the hind foot, which is provided with a flat crooked nail somewhat longer than the rest; the soles of the feet are formed of fleshy naked protuberances, divided by furrows. It lives mostly about the mouths of caves or clefts in rocks, is gregarious, feeds entirely on vegetables, is mild, feeble, timid, and easily tamed, and has no voice or cry. Mr Bruce is of opinion, that this animal is the gannim, or daman Israel, of the Arabs, and the saphan of sacred Scriptures, which has erroneously been translated the rabbit. Its flesh is very white, but is not eaten by the Abyssinians or Mahometans. The same celebrated traveller is of opinion, that it ruminates, or chews the cud."

SAPINDUS, the SOAP-BERRY TREE, in botany: A genus of the digynia order, belonging to the octandria class of plants; and in the natural method ranking under the 23d order, *Tribilata*. The calyx is tetraphyllous; the petals four; the capsules are corneous, valvate, and ventricose.

The species are, 1. The saponaria, with winged leaves, grows naturally in the islands of the West Indies, where it rises with a woody stalk from 20 to 30 feet high, sending out many branches garnished with winged leaves composed of several pair of spear-shaped lobes. The midrib has a membranaceous or leafy border, running on each side from one pair of lobes to the other, which is broadest in the middle between the lobes; the flowers are produced in loose spikes, at the end of the branches; they are small and white, so make no great appearance. These are succeeded by oval berries as large as middling cherries, sometimes single, at others, two, three, or four are joined together; these have a saponaceous skin or cover, which incloses a very smooth roundish nut of the same form, of a shining black when ripe. The skin or pulp which surrounds the nuts is used in America to wash linen; but it is very apt to burn and destroy it if often used, being of a very acrid nature. 2. The rigidus, with rigid acute-winged leaves, grows in India. This hath a strong woody stalk, which rises about 20 feet high, sending out many strong ligneous branches, covered with a smooth grey bark, and garnished with winged

leaves, composed of many spear-shaped lobes; they are of a pale green, and sit close to the midrib, which has no border or wing like the other. The end of the branches are divided into two or three foot-stalks, each sustaining a loose spike of flowers like those of the other sort; these are succeeded by roundish berries like those of the former.

These plants are propagated by seeds; they must be put into small pots, and plunged into a hot-bed of tanner's bark. In five or six weeks the plants will appear, when the glasses of the hot-bed should be raised every day in warm weather, to admit fresh air to the plants. In three weeks or a month after the plants appear, they will be fit to transplant, when they must be shaken out of the pots, and carefully parted, so as not to injure their roots, and each planted into a separate small pot, and plunged into the hot-bed again, observing to shade them from the sun until they have taken new root; after which time they must have free air admitted to them every day when the weather is warm, and will require to be frequently watered.

SAPONARIA, **SOPEWORT**, in botany: A genus of the digynia order, belonging to the decandria class of plants; and in the natural method ranking under the 22d order, *Caryophyllei*. The calyx is monophyllous and naked; there are five unguled petals; the capsule is oblong and unilocular.

The most remarkable species is the officinalis, or common sopewort, which grows naturally in many parts of this country. It has a creeping root, so that in a short time it would fill a large space of ground. The stalks are about two feet high, and of a purplish colour. The footstalks of the flowers arise from the wings of the leaves opposite; they sustain four, five, or more purple flowers each; which have generally two small leaves placed under them. The stalk is also terminated by a loose bunch of flowers growing in form of an umbel; they have each a large swelling cylindrical empalement, and five broad obtuse petals, which spread open, of a purple colour. These are succeeded by oval capsules, with one cell filled with small seeds.—The decoction of this plant is used to cleanse and scour woollen cloths: the poor people in some countries use it instead of soap for washing; from whence it had its name.

SAPOR, **TASTE**. See **TASTE**; and **ANATOMY**, n° 139.

SAPOTA. See **ACHRAS**.

SAPPERS, are soldiers belonging to the royal artillery, whose business it is to work at the saps, and for which they have an extraordinary pay. A brigade of sappers generally consists of eight men, divided equally into two parties; and whilst one of these parties is advancing the sap, the other is furnishing the gabions, fascines, and other necessary implements, who relieve each other alternately.

SAPPHIRA, was the wife of a rich merchant in Gueldres, and equally distinguished for her beauty and her virtue. Rhinsauld, a German officer, and governor of the town of Gueldres, fell in love with her; and not being able to seduce her either by promises or presents, he imprisoned her husband, pretending that he kept up a traiterous correspondence with the enemies of the state.—Sapphira yielded to the passion of the go-

Saponaria
Sapphira.

Sapphire. vernor in order to relieve her husband from chains; but private orders had already been given to put him to death. His unhappy widow, overwhelmed with grief, complained to Charles duke of Burgundy. He ordered Rhinfauld to marry her, after having made over to her all his possessions. As soon as the deed was signed, and the marriage over, Charles commanded him to be put to death. Thus the children of a wife whom he had seduced, and of a husband whom he had murdered, became lawful heirs to all his wealth.

SAPPHIRE, a genus of precious stones, of a blue colour, and the hardest of all except the ruby and diamond. They are found in the same countries with the ruby; also in Bohemia, Alsace, Siberia, and Auvergne. M. Rome de l'Isle mentions one found at Auvergne, which appeared quite green or blue according to the position in which it was viewed. Cronstedt, however, informs us, that the blue fluor spars are frequently met with in collections under the name of *sapphires*; and it is certain from Pliny, B. 37. chap. 9. that the sapphire of the ancients was our lapis lazuli. They are seldom found of a deep blue colour throughout, or free from parallel veins; and when they are but slightly tinged, they are named *white sapphires*. The late unfortunate king of France had one with a stripe of fine yellow topaz in the middle. Some are found half green and half red, and are foliated like the ruby. The fine hard sapphires, called by the jewellers *oriental*, are of the same nature with the ruby and topaz, excepting the mere circumstance of colour. They are commonly in two oblong hexagon pyramids, joined at their base, and pointed at top; sometimes also in hexagonal columns.

The finest sapphires, like most of the gems, come from the East Indies. Russia does not produce the sapphire. In Scotland they are found of a hardness and lustre equal to the oriental, both light and deep coloured, at Benachie, and Invercauld, Aberdeenshire; Portsoy in Banffshire, and many other places. Mr Deuchar, seal-engraver in Edinburgh, has in his possession a beautiful sapphire, which was found in a double crystal. On one of these is cut a head, which was effected with the greatest difficulty, on account of its hardness; the other is cut into facets, and has a fine water, and great brilliancy.

The specific gravity of these precious stones, according to Bergman, is from 3,650 to 3,940. According to others the specific gravity of the oriental sapphires is 3,994; that of the Brazilian 3,1307; and of those from Puy in Auvergne, 4,0769. When powdered, they are fusible with borax, or microcosmic salt, into a transparent glass; and the same thing happens on treating them with magnesia alba. They are said to lose their colour by fire, and to become so hard and transparent as sometimes to pass for diamonds; but Mr Achard found this to be a mistake, and that the true sapphires are not in the least altered either in colour, hardness, or weight, by the most intense fire. Those of Puy in Auvergne, however, though by their colour and hardness they seem to approach the oriental sapphires, lose both their colour and transparency in the fire, becoming black, and even vitrifying, which plainly shows them to be of a different kind. Engestroom informs us, that the sapphires, in their rough or native state, generally crystallize in two oblong hexagonal pyramids pointed at top,

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and joined at their bases, but are sometimes found of an hexagonal or columnar form.—A good sapphire of ten carats is valued at 50 guineas; if it weighs 20 carats, it is valued at 200 guineas; and, if under ten carats, its value may be found by multiplying the carat at 10s. 6d. by the square of its weight.—Sapphires are preferable to common rubies for jewelling watches, on account of the homogeneous hardness of their substance; some red stones resembling rubies being met with, which are not uniformly hard.

SAPPHO, a famous poetess of antiquity, who for her excellence in her art has been called the *Tenth Muse*, was born at Mitylene in the isle of Lesbos, about 610 years before Christ. She was contemporary with Stesichorus and Alcæus; which last was her countryman, and as some think her suitor. A verse of this poet, in which he insinuates to her his passion, is preserved in Aristotle, *Rhet. lib. i. cap. 9.* together with the fair damsel's answer.

ALC. I fain to Sappho would a wish impart,
But fear locks up the secret in my heart.
SAP. Thy downcast looks, respect, and timid air,
Too plain the nature of thy wish declare.
If lawless, wild, inordinate desire,
Did not with thoughts impure thy bosom fire,
Thy tongue and eyes, by innocence made bold,
Ere now the secret of thy soul had told.

M. la Fevre observes, that Sappho was not in her usual good-humour when she gave so cold an answer to a request, for which, at another time, perhaps she would not have waited.—It has been thought, too, that Anacreon was one of her lovers, and his editor Barnes has taken some pains to prove it: but chronology will not admit this; since, upon inquiry, it will be found that Sappho was probably dead before Anacreon was born. Of the numerous poems this lady wrote, there is nothing remaining but some small fragments, which the ancient scholiasts have cited; a hymn to Venus, preserved by Dionysius of Halicarnassus; and an ode to one of her mistresses †: which last piece confirms a tradition delivered down from antiquity, that her amorous passion extended even to persons of her own sex, and that she was willing to have her mistresses as well as her gallants.

Ovid introduces her making a sacrifice to Phaon, one of her male paramours; from which we learn, that Sappho's love for her own sex did not keep her from loving ours. She fell desperately in love with Phaon, and did all she could to win him; but in vain: upon which she threw herself headlong from a rock, and died. It is said that Sappho could not forbear following Phaon into Sicily, whither he retired that he might not see her; and that during her stay in that island she probably composed the hymn to Venus, still extant, in which she begs so ardently the assistance of that goddess. Her prayers, however, proved ineffectual: Phaon was cruel to the last degree. The unfortunate Sappho was forced to take the dreadful leap; she went to the promontory Leucas, and threw herself into the sea. The cruelty of Phaon will not surprise us so much, if we reflect, that she was a widow (for she had been married to a rich man in the isle of Andros, by whom she had a daughter, named *Cleis*); that she had never been hand-

Sappho.

† See *Poetry*; n^o 122.

Saraband
||
Saragossa.

some; that she had observed no measure in her passion to both sexes; and that Phaon had long known all her charms. She was, however, a very great wit, and for that alone deserves to be remembered. The Mitylenians held her merit in such high esteem, that they paid her sovereign honours after her death, and stamped their money with her image. The Romans afterwards erected a noble statue of porphyry to her; and in short, ancients as well as moderns have done honour to her memory. Vossius says, that none of the Greek poets excelled Sappho for sweetness of verse; and that she made Archilochus the model of her style, but at the same time took care to soften the severity of his expression. It must be granted, says Rapin, from what is left us of Sappho, that Longinus had great reason to extol the admirable genius of this woman; for there is in what remains of her something delicate, harmonious, and impassioned to the last degree.

SARABAND, a musical composition in the triple time, the motions of which are slow and serious.

Saraband is also a dance to the same measure, which usually terminates when the hand that beats the time falls; and is otherwise much the same as the minuet.

The saraband is said to be originally derived from the Saracens, and is usually danced to the sound of the guitar or castanettes.

SARACA, in botany; a genus of the hexandria order, belonging to the diadelphia class of plants.—There is no calyx: the corolla is funnel-shaped and quadrifid; the filaments are on each side the throat of the corolla; the legumen is pedicellated.

SARACENS, the inhabitants of Arabia; so called from the word *sara*, which signifies a desert, as the greatest part of Arabia is; and this being the country of Mahomet, his disciples were called Saracens.

SARAGOSSA, a city of Spain, in the kingdom of Arragon, with an archbishop's see, an university, and a court of inquisition. It is said to have been built by the Phœnicians; and the Romans sent a colony here in the reign of the emperor Augustus, whence it had the name of *Cæsar Augustus*, which by corruption has been changed into Saragossa. It is a large, handsome, and well-built town. The streets are long, broad, well-paved, and very clean, and the houses from three to six stories high. It is adorned with many magnificent buildings; and they reckon 17 large churches, and 14 handsome monasteries, not to mention others less considerable. The river Ebro runs cross the place, dividing it into two; and on its banks is a handsome quay, which serves for a public walk. The Holy-street is the largest, and so broad that it may be taken for a square; and here they have their bull-fights: in this street there are several noblemens families, particularly that of the viceroy. The convents are handsome and richly adorned, as well as the churches. The cathedral church is a spacious building, after the Gothic taste; but the finest church is that of Nuestra Señora del Pilar, seated on the side of the Ebro, and is a place of the greatest devotion in Spain. They tell us the Virgin appeared to St James, who was preaching the gospel, and left him her image, with a handsome pillar of jasper: it is still in this church which they pretend is the first in the world built to her honour. This image stands on a marble pillar, with a little Jesus in her arms; but the place is so dark, that it cannot be seen without the assistance of

lamps, which are 50 in number, and all of silver. There are also chandeliers and balustrades of massy silver. The ornaments of this image are the richest that can be imagined, her crown being full of precious stones of an inestimable price; in short, there is scarce any thing to be seen but gold and jewels, and a vast number of people come in pilgrimage thither. The town-house is a sumptuous structure, adorned with fine columns: in the hall are the pictures of all the kings of Arragon; and in a corner of it St George on horseback, with a dragon of white marble under him. It is seated in a very large plain, where the Ebro receives two other rivers; and over it are two bridges, one of stone and the other of wood, which last has been thought the most beautiful in Europe. A victory was obtained here over the French and Spaniards in 1710, but it was abandoned by the allies soon after. It is 97 miles west by north of Tarragona, 137 west of Barcelona, and 150 north-east of Madrid. W. Long. 0. 48. N. Lat. 41. 47.

SARANNE. See LILIUM.

SARCASM, in rhetoric, a keen bitter expression which has the true point of satire, by which the orator scoffs and insults his enemy: such as that of the Jews to our Saviour; "He saved others, himself he cannot save."

SARCOCELE, in surgery, a spurious rupture or hernia, wherein the testicle is considerably tumefied or indurated, like a scirrhus, or much enlarged by a fleshy excrescence, which is frequently attended with acute pains, so as to degenerate at last into a cancerous disposition. See SURGERY.

SARCOCOLLA, a concrete juice brought from Persia and Arabia, in small whitish-yellow grains, with a few of a reddish and sometimes of a deep red colour mixed with them; the whitest tears are preferred, as being the freshest: its taste is bitter, accompanied with a dull kind of sweetness. This drug dissolves in watery liquors, and appears chiefly to be of the gummy kind, with a small admixture of resinous matter. It is principally celebrated for conglutinating wounds and ulcers (whence its name *σαρκωκολα* *flesh-glue*); a quality which neither this nor any other drug has any just title to.

SARCOLOGY, is that part of anatomy which treats of the soft parts, viz. the muscles, intestines, arteries, veins, nerves, and fat.

SARCOMA, in surgery, denotes any fleshy excrescence.

SARCOPHAGUS, in antiquity, a sort of stone coffin or grave, wherein the ancients laid those they had not a mind to burn.

The word, as derived from the Greek, literally signifies *flesh-eater*; because at first they used a sort of stone for the making of tombs, which quickly consumed the bodies. See the following article.

SARCOPHAGUS, or *Lapis Aësius*, in the natural history of the ancients, a stone much used among the Greeks in their sepultures, is recorded to have always perfectly consumed the flesh of human bodies buried in it in forty days. This property it was much famed for, and all the ancient naturalists mention it. There was another very singular quality also in it, but whether in all, or only in some peculiar pieces of it, is not known: that is, its turning into stone any thing that was put into vessels made of it. This is recorded only

Saranne
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Sarcophagus.

Sarcophagus
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Sardanapalus.

only by Mutianus and Theophrastus, except that Pliny had copied it from these authors, and some of the later writers on these subjects from him. The account Mutianus gives of it is, that it converted into stone the shoes of persons buried in it, as also the utensils which it was in some places customary to bury with the dead, particularly those which the person while living most delighted in. The utensils this author mentions, are such as must have been made of very different materials; and hence it appears that this stone had a power of consuming not only flesh, but that its petrifying quality extended to substances of very different kinds. Whether ever it really possessed this last quality has been much doubted; and many, from the seeming improbability of it, have been afraid to record it. What has much encouraged the general disbelief of it is, Mutianus's account of its taking place on substances of very different kinds and textures; but this is no real objection, and the whole account has probably truth in it. Petrifications in those early days might not be distinguished from incrustations of sparry and stony matter on the surfaces of bodies only, as we find they are not with the generality of the world even to this day; the incrustations of spar on mosses and other substances in some of our springs, being at this time called by many *petrified moss*, &c. and incrustations like these might easily be formed on substances enclosed in vessels made of this stone, by water passing through its pores, dislodging from the common mass of the stone, and carrying with it particles of such spar as it contained; and afterwards falling in repeated drops on whatever lay in its way, it might again deposit them on such substances in form of incrustations. By this means, things made of ever so different matter, which happened to be inclosed, and in the way of the passage of the water, would be equally incrustated with and in appearance turned into stone, without regard to the different configuration of their pores and parts.

The place from whence the ancients tell us they had this stone was Affos, a city of Lycia, in the neighbourhood of which it was dug; and De Boot informs us, that in that country, and in some parts of the East, there are also stones of this kind, which, if tied to the bodies of living persons, would in the same manner consume their flesh. *Hill's Notes on Theophrastus*, p. 14.

SARCOTICS, in surgery, medicines which are supposed to generate flesh in wounds.

SARDANAPALUS, the last king of Assyria, whose character is one of the most infamous in history. He is said to have sunk so far in depravity, that, as far as he could, he changed his very sex and nature. He clothed himself as a woman, and spun amidst companies of his concubines. He painted his face, and behaved in a more lewd manner than the most lascivious harlot. In short, he buried himself in the most unbounded sensuality, quite regardless of sex and the dictates of nature. Having grown odious to all his subjects, a rebellion was formed against him by Arbaces the Mede and Belshis the Babylonian. They were attended, however, with very bad success at first, being defeated with great slaughter in three pitched battles. With great difficulty Belshis prevailed upon his men to keep the field only five days longer; when they were joined by the Bactrians, who had come to the assistance of Sardanapalus, but

had been prevailed upon to renounce their allegiance to him. With this reinforcement they twice defeated the troops of Sardanapalus, who shut himself up in Nineveh the capital of his empire. The city held out for three years; at the end of which, Sardanapalus finding himself unable to hold out any longer, and dreading to fall into the hands of an enraged enemy, retired into his palace, in a court of which he caused a vast pile of wood to be raised; and heaping upon it all his gold and silver, and royal apparel, and at the same time inclosing his eunuchs and concubines in an apartment within the pile, he set fire to it, and so destroyed himself and all together.

SARDINIA, an island of the Mediterranean, bounded by the strait which divides it from Corsica on the north; by the Tuscan sea, which flows between this island and Italy, on the east; and by other parts of the Mediterranean sea on the south and west. It is about 140 miles in length and 70 in breadth, and contains 420,000 inhabitants. The revenue arises chiefly from a duty upon salt, and is barely sufficient to defray the expences of government; but it certainly might be considerably augmented, as the soil produces wine, corn, and oil, in abundance. Most of the salt that is exported is taken by the Danes and Swedes; the English formerly took great quantities for Newfoundland, but having found it more convenient to procure it from Spain and Portugal, they now take little or none. A profitable tunny fishery is carried on at the south-west part of the island, but it is monopolized by the Duke de St. Pierre, and a few more people, who happen to be proprietors of the adjoining land. Wild boars abound in the hilly parts of the island, and here are some few deer, not so large as those in Britain, but in colour and make exactly the same. Beeves and sheep are also common, as well as horses.

The feudal system still subsists in a limited degree, and titles go with their estates, so that the purchaser of the latter inherits the former. The regular troops seldom exceed 2000 men; but the militia amount to near 26,000, of whom 11,000 are cavalry. Their horses are small, but uncommonly active. In a charge, we should beat them: but, on a march, they would be superior to us. The country people are generally armed; but notwithstanding their having been so long under the Spanish and Italian government, assassinations are by no means frequent; and yet by the laws of the country, if a man stabs another without premeditated malice, within four hours after quarrelling with him, he is not liable to be hanged. On the other hand, the church affords no protection to the guilty. The Sardinians are not at all bigoted; and, next to the Spaniards, the English are their favourites. The whole island is subject to the Duke of Savoy, who enjoys the title of king of Sardinia. See **CAGLIARI**.

There is in this island a pleasing variety of hills and valleys, and the soil is generally fruitful; but the inhabitants are a slothful generation, and cultivate but a little part of it. On the coast there is a fishery of anchovies and coral, of which they send large quantities to Genoa and Leghorn. This island is divided into two parts; the one, called *Capo-di-Cagliari*, lies to the south; and the other *Capo-di-Lugary*, which is seated to the north. The principal towns are Cagliari the capital, Oristagno, and Sassari.

Sardinia.

*Sutherland's
Tour up the
Straits.*

Sardis
||
Sardonyx.

SARDIS, or **SARDES**, now called *Sardo* or *Sart*, is an ancient town of Natolia in Asia, about 40 miles east of Smyrna. It was much celebrated in early antiquity, was enriched by the fertility of the soil, and had been the capital of the Lydian kings. It was seated on the side of mount Tmolus; and the citadel, placed on a lofty hill, was remarkable for its great strength. It was the seat of King Croesus, and was in his time taken by Cyrus; after which the Persian Satrapas or commandant resided at Sardis as the emperor did at Susa. The city was also taken, burnt, and then evacuated by the Milesians in the time of Darius, and the city and fortresses surrendered on the approach of Alexander after the battle of Granicus. Under the Romans Sardis was a very considerable place till the time of Tiberius Cæsar, when it suffered prodigiously by an earthquake. The munificence of the emperor, however, was nobly exerted to repair the various damages it then sustained. Julian attempted to restore the heathen worship in the place. He erected temporary altars where none had been left, and repaired the temples if any vestiges remained. In the year 400 it was plundered by the Goths, and it suffered considerably in the subsequent troubles of Asia. On the incursion of the Tartars in 1304, the Turks were permitted to occupy a portion of the citadel, separated by a strong wall with a gate, and were afterwards murdered in their sleep. The site of this once noble city is now green and flowery, the whole being reduced to a poor village, containing nothing but wretched huts. There are, however, some curious remains of antiquity about it, and some ruins which display its ancient grandeur. See *Chandler's Travels in Asia Minor*, p. 251, &c.

There is in the place a large caravansary, where travellers may commodiously lodge. The inhabitants are generally shepherds, who lead their sheep into the fine pastures of the neighbouring plain. The Turks have a mosque here, which was a Christian church, at the gate of which there are several columns of polished marble. There are a few Christians, who are employed in gardening. E. Long. 28. 5. N. Lat. 37. 51.

SARDONIUS RISUS, *Sardonian Laughter*. A convulsive involuntary laughter; thus named from the herba fardonia, which is a species of ranunculus, and is said to produce such convulsive motions in the cheeks as resemble those motions which are observed in the face during a fit of laughter. This complaint is sometimes speedily fatal. If the ranunculus happens to be the cause, the cure must be attempted by means of a vomit, and frequent draughts of hydromel with milk.

SARDONYX, a precious stone consisting of a mixture of the chalcedony and carnelian, sometimes in strata, but at other times blended together. It is found, 1. Striped with white and red strata, which may be cut in *cameo* as well as the onyx. 2. White with red dentritic figures, greatly resembling the mocha-stone; but with this difference, that the figures in the fardonyx are of a red colour, in the other black. There is no real difference, excepting in the circumstance of hardness, between the onyx, carnelian, chalcedony, fardonyx, and agate, notwithstanding the different names bestowed upon them. Mongez informs us, that the yellow, or orange-coloured agates, with a wavy or undulating surface, are now commonly called fardonyx. See **CARNELIAN** and **ONYX**.

SARGUS, in ichthyology. See **SPARUS**.

SARIMPATAM, a country of Indostan, lying at the back of the dominions of the Samorin of Malabar, and which, as far as we know, was never subdued by any foreign power. Mr Grose relates, that "it has been constantly a maxim with the inhabitants of this country never to make any but a defensive war; and even then, not to kill any of their adversaries in battle, but to cut off their noses. To this service the military were peculiarly trained up, and the dread of the deformity proved sufficiently strong to keep their neighbours, not much more martial than themselves, from effectually attacking them."

SARMENTOSÆ (from *sarmentum*, a long shoot like that of a vine); the name of the 11th class in Linnaeus's Fragments of a Natural Method, consisting of plants which have climbing stems and branches, that, like the vine, attach themselves to the bodies in their neighbourhood for the purpose of support. See **BOTANY**, p. 459.

SAROTHRA, in botany: A genus of the trigynia order, belonging to the pentandria class of plants; and in the natural method ranking under the 20th order, *Rotaceæ*. The corolla is pentapetalous; the capsule unilocular, trivalved, and coloured.

SARPLAR of Wool, a quantity of wool, otherwise called a *pocket* or *half-sack*; a sack containing 80 tod; a tod two stone; and a stone 14 pounds.—In Scotland it is called *sarpliath*, and contains 80 stone.

SARRACONIA, in botany: A genus of the monogynia order, belonging to the polyandria class of plants; and in the natural method ranking under the 54th order, *Miscellaneæ*. The corolla is pentapetalous; the calyx is double, and triphyllous below; pentaphyllous above; the capsule quinquelocular; the style has a stigma of the form of a shield.

SARSAPARILLA, in botany. See **SMILAX**.

SARTORIUS, in ANATOMY. See there, *Table of the Muscles*.

OLD SARUM, in Wilts, about one mile north of New Sarum or Salisbury, has the ruins of a fort which belonged to the ancient Britons; and is said also to have been one of the Roman stations. It has a double intrenchment, with a deep ditch. It is of an orbicular form, and has a very august look, being erected on one of the most elegant plans for a fortress that can be imagined. In the north-west angle stood the palace of the bishop, whose see was removed hither from Wilton and Sherborn; but the bishop quarrelling with King Stephen, he seized the castle and put a garrison into it, which was the principal cause of its destruction; as the see was soon after removed from hence to Salisbury in 1219. The area of this ancient city is situated on an artificial hill, whose walls were three yards thick, the ruins of which in many places in the circumference are still to be seen, and the tracks of the streets and cathedral church may be traced out by the different colour of the corn growing where once the city stood. Here synods and parliaments have formerly been held, and hither were the states of the kingdom summoned to swear fidelity to William the Conqueror. Here also was a palace of the British and Saxon kings, and of the Roman emperors; which was deserted in the reign of Henry III. for want of water, so that one farm-house is all that is left of this ancient city; yet it is called the *Barrough*.

Sargus
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Sarum.

Sarum
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Satellite.

rough of Old Sarum, and sends two members to parliament, who are chosen by the proprietors of certain adjacent lands.

In February 1795 a subterraneous passage was discovered at this place, of which we have the following account in the Gentleman's Magazine for March, in a letter dated Salisbury, Feb. 10. "Some persons of Salisbury on Saturday last went to the upper verge of the fortification (the citadel), and on the right-hand, after they had reached the summit, discovered a large hole. They got a candle and lantern, and went down a flight of steps for more than 30 yards. It was an arched way seven feet wide, neatly chiseled out of the solid rock or chalk. It is probable the crown of the arch gave way from the sudden thaw, and fell in. There is a great deal of rubbish at the entrance. It appears to be between six and seven feet high, and a circular arch overhead all the way. These particulars I learned from the person who himself explored it; but was afraid to go farther lest it might fall in again and bury him. He thinks it turns a little to the right towards Old Sarum house, and continues under the fosse till it reached the outer verge. The marks of a chisel, he says, are visible on the side. There are two large pillars of square-stone at the entrance, which appear to have had a door at foot. They are 18 inches by 27, of good free-stone, and the mason-work is extremely neat. The highest part of the archway is two feet below the surface of the ground.

"It is all now again filled up by order of farmer Whitchurch, who rents the ground of Lord Camelford, and thinks curiosity would bring so many people there as to tread down his grass whenever grass shall be there. I went into it 30 yards, which was as far as I could get for the rubbish. I measured it with a line, and found it extend full 120 feet inwards from the two pillars supposed to be the entrance; then onwards it appeared to be filled to the roof with rubbish. By measuring with the same line on the surface of the earth, I found it must go under the bottom of the outer bank of the outer trench; where I think the opening may be found by digging a very little way. Whether it was a Roman or a Norman work it is difficult to say; but it certainly was intended as a private way to go into or out of the castle; and probably a fort or strong castle was built over the outer entrance. I looked for inscriptions or coins, but have not heard of any being found."

SASAFRAS. See LAURUS.

SASHES, in military dress, are badges of distinction worn by the officers of most nations, either round their waist or over their shoulders. Those for the British army are made of crimson silk: for the Imperial army crimson and gold; for the Prussian army black silk and silver; the Hanoverians yellow silk; the Portuguese crimson silk with blue tassels.

SASINE, or SEISIN. See LAW, N° clxiv. 15, &c.

SASSA. See MYRRH, OPOCALPASM, and Bruce's Travels, Vol. V. p. 27, &c.

SATAN, a name very common in Scripture, means the devil or chief of the fallen angels. See DEVIL.

SATELLITE, in astronomy, the same with a secondary planet or moon.

SATIRE. See SATYR.

SATRAPA, or SATRAPES, in Persian antiquity, denotes an admiral; but more commonly the governor of a province.

SATTIN, a glossy kind of silk stuff, the warp of which is very fine, and stands so as to cover the coarser woof.

SATTINET, a slight thin kind of fatten, commonly striped, and ordinarily used by the ladies for summer night-gowns.

SATURANTS, in anatomy, the same with ABSORBENTS.

SATURATION, in chemistry, is the impregnating an acid with an alkali, or *vice versa*, till either will receive no more, and the mixture will then become neutral.

SATURDAY, the seventh and last day of the week, so called from the idol Seater, worshipped on this day by the ancient Saxons, and thought to be the same as the Saturn of the Latins.

SATUREIA, SAVORY, in botany: A genus of the gymnospermia order, belonging to the didynamia class of plants; and in the natural method ranking under the 42d order, *Verticillata*. The segments of the corolla are nearly equal; the stamina standing asunder.

Species. 1. The hortensis, or summer savory, is an annual plant, which grows naturally in the south of France and Italy, but is cultivated in this country both for the kitchen and medicinal use. 2. The montana, or winter savory, is a perennial plant growing naturally in the south of France and Italy, but is cultivated in gardens both for culinary and medicinal purposes.

Culture. Both kinds are propagated by seeds. Those of the first kind should be sown in the beginning of April upon a bed of light earth, either where they are to remain, or for transplanting. If the plants are to stand unremoved, they should be sown thinly; but if they are to be transplanted, they may be sown closer. The second species may be sown upon a poor dry soil, where the plants will endure the severest winters, though they are often killed by the frost when planted in good ground. The plants will continue several years; but when they are old, the shoots will be shot and not so well furnished with leaves: it will therefore be proper to raise a supply of young plants every year.

Uses. Summer savory is a very warm pungent aromatic; and affords in distillation with water a subtile essential oil, of a penetrating smell, and very hot acrid taste. It yields little of its virtues by infusion to aqueous liquors; rectified spirit extracts the whole of its taste and smell, and elevates nothing in distillation.

SATURN, in astronomy, one of the planets of our solar system, revolving at the distance of more than 900 millions of miles from the sun. See ASTRONOMY, n° 31, 104—109, 191, and 269.

Dr Herschel, who has so much signalized himself by his discoveries in the celestial regions, has not omitted to make his observations on this planet, which he considers as one of the most engaging objects that astronomy offers to our view. His attention was first drawn to it in the year 1774, when he saw its ring resembling in appearance a narrow line, extending on both sides not much less than the diameter of the planet's disk. The observation was taken with a five and an half feet reflector.

Satire
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Saturn.

Saturn.

reflector on the 17th of March; and on the 3d of April, the same year, when the planet appeared totally deprived of this noble appendage, by reason of the edge of the ring being then turned directly towards the earth, and invisible on account of its thinness or incapacity to reflect the light to such a distance. During the succeeding year, the ring appeared gradually opened, and at last assumed the shape of an ellipse. "It should be noticed (says he), that the black disk or belt upon the ring of Saturn is not in the middle of its breadth. Nor is the ring subdivided by many such lines, as has been represented in several treatises of astronomy; but that there is one single, dark, considerably broad line, belt, or zone, upon the ring, which I have always permanently found in the place where my figure represents it."

This zone, which is on the northern part of the ring, does not change its shape or colour like the belts of Jupiter, so that it is probably owing to some permanent projection. It cannot, however, be the shadow of a chain of mountains, as it is visible all round the ring; and there could be no shades visible at the ends of the ansæ, on account of the direction of the sun's illumination, which would be in the line of the chain; and the supposed argument will hold good against the supposition of caverns or concavities. It is likewise evident, that this dark zone is contained between two concentric circles, as all the phenomena answer to the projection of such a zone. The Doctor gives a figure, representing the planet as it appeared to him on the 10th of May 1780; whence we see that the zone is continued all the way round, with a gradual decrease towards the middle, answering to the appearance of a narrow circular plane projected into an ellipsis. See *Philosoph. Trans.* for 1790, p. 3, &c.

It hath been conjectured, that this appearance is owing to a division of the ring, or rather that there are two rings about the planet; "but (says Dr Herschel) if one ring, of a breadth so considerable as that of Saturn, is justly to be esteemed the most wonderful arch that by the laws of gravity can be held together, how improbable must it appear to suppose it subdivided into narrow slips of rings, which by this separation will be deprived of a sufficient depth, and thus lose the only dimension which can keep them from falling upon the planet? It is true, indeed, that it may revolve with such velocity as greatly to assist its strength, and that in the subdivisions, of course, the different velocities for each division may be equally supposed to keep them up."

As to the substance of the ring, the Doctor supposes it to be no less solid than that of Saturn himself. Thus in the two figures given with the Doctor's Dissertation in the *Philosophical Transactions* above referred to, the shadow of the planet is delineated upon the ring as it actually appeared, according to the situation of the sun; and in like manner we will see the shadow of the ring upon the planet: and if we deduce the quantity of matter contained in the planet from the power by which the satellites are preserved in their orbits, the ring must also be taken into account. It is indeed evident that the ring exerts a very considerable force upon these bodies, since we find them affected with many irregularities in their motions, which we cannot properly ascribe to any other cause than the quantity of matter contained in the ring; or, at least, it ought to be allowed to have a proper share in producing them.

Saturn.

The ring seems to be endowed with a greater reflective power than the body of the planet; and the Doctor gives instances of his seeing part of the ring brighter than Saturn himself, as well as of his seeing it plainly through a telescope which could scarcely afford light enough for the planet. The most remarkable property of this wonderful ring, however, is its extreme thinness. "When we were nearly in the plane of the ring (says our author), I have repeatedly seen the first, second, and third satellites, nay even the sixth and seventh, pass before and behind the ring in such a manner that they served as excellent micrometers to estimate its thickness. It may be proper to mention a few instances, especially as they will serve to solve some phenomena that have been remarked by other astronomers, though they have not been accounted for in a manner consistently with other known facts. July 18th 1789, at 19^h 41' 9", sidereal time, the first satellite seemed to hang upon the following arm, declining a little towards the north, and I saw it gradually advance upon it towards the body of Saturn; but the ring was not so thick as the lucid point. July 23d, at 19^h 41' 8"; the second satellite was a very little preceding the ring; but the ring appeared to be less than half the thickness of the satellite. July 27th, at 20^h 15' 12", the second satellite was about the middle, upon the following arm of the ring, and towards the south; and the sixth satellite on the farther end towards the north; but the arm was thinner than either of them, Aug. 29th, at 22^h 12' 55", the third satellite was upon the ring, near the end of the preceding arm, when the latter seemed not to be the fourth, or at most the third part of the diameter of the satellite; which, in the situation it was, I took to be less than one single second in diameter. At the same time, I also saw the seventh satellite following the third, at a little distance, in the shape of a bead upon a thread, projecting on both sides of the same arm. Hence also we are sure that the arm appeared thinner than the seventh satellite, which is considerably smaller than the sixth, which again is less than the first. August 31st, at 20^h 48' 26", the preceding arm was loaded about the middle with the third satellite. October 15th, at 0^h 43' 44", I saw the sixth satellite, without obstruction, about the middle of the preceding arm, though the ring was but barely visible with my 40 feet reflector, even while the planet was in the meridian. However, we were then a little inclined to the plane of the ring, and the third satellite, when it came near its conjunction with the first, was so situated, that it must have partly covered it a few minutes after I lost it behind my house. In all these observations, the ring did not in the least interfere with my view of the satellites. October 16th, I followed the sixth and seventh satellites up to the very disk of the planet; and the ring, which was extremely faint, did not in the least obstruct my seeing them gradually approach the disk, where the seventh vanished at 21^h 46' 44", and the sixth at 22^h 36' 44". There is, however, some suspicion, that by a refraction through some very rare atmosphere on the two planes of the ring, the satellites might be lifted up and depressed so as to become visible on both sides of the ring, even though the latter should be equal in thickness to the diameter of the smallest satellite, which may amount to 1000 miles.—As for the arguments of its incredible thinness, which

some

Saturn. some astronomers have brought from the short time of its being invisible when the earth passes through its plane, we cannot set much value upon them; for they must have supposed the edge of the ring, as they have also represented it in their figures, to be square; but there is the greatest reason to suppose it either spherical or spheroidal; in which case evidently the ring cannot disappear for any long time. Nay, I may venture to say, that the ring cannot possibly disappear, on account of its thinness; since, either from the edge or the sides, even if it were square on the corners, it must always expose to our sight some part which is illuminated by the rays of the sun; and that this is plainly the case we may conclude from its being visible in my telescopes during the time when others of less light had lost it; and when evidently we were turned towards the unenlightened side, so that we must either see the rounding side of the unenlightened edge, or else the reflection of the light of Saturn upon the side of the darkened ring, as we see the reflected light of the earth on the darkened part of the new moon. I will not, however, take upon me to decide which of the two may be the case, especially as there are other very strong reasons which induce us to think that the edge of the ring is of such a nature as not to reflect much light."

Several astronomers have supposed that the ring of Saturn is full of mountains and inequalities, like the moon; and of this opinion Dr Herschel himself was for a considerable time, till happening to observe one of these lucid points with attention for a considerable time, he saw it leave the ring altogether, and show itself as a satellite never before observed. With regard to the ring itself, he concludes his observations in these words: "Upon the whole, therefore, I cannot say that I had any one instance that could induce me to believe that the ring was not of one uniform thickness; that is, equally thick at equal distances from the centre, and of an equal diameter throughout the whole of its construction. The idea of protuberant points upon the ring of Saturn, indeed, is of itself sufficient to render their existence inadmissible, when we consider the enormous size which such points ought to be of to render them visible at the distance we are from that planet."

With regard to the satellites, the Doctor informs us, that he was long convinced of the existence of a sixth; and had he been more at leisure at the time of his discovering those of the Georgium Sidus, he would probably have completed the discovery of the satellites of Saturn also. The sixth was first observed distinctly on the 28th of August 1789, and the seventh on the 17th of September the same year. These satellites, however, do not occupy the place which we should have previously supposed them, being, in fact, the innermost of the whole. The seventh is next the body of the planet itself, and is very small. It revolves at the distance of $27^{\circ}366$ from the centre of Saturn, and seems to move exactly in the plane of the ring; but the Doctor observes, that it is exceedingly difficult to make a sufficient number of observations on it to determine the revolution exactly. He computes its periodical time at $22^h 40' 46''$. The sixth satellite is next to the seventh, and revolves at the distance of $35^{\circ}.058$ from the centre of its primary in $10^h 8^m 53^s 9^{\circ}$. Its light is considerably strong, but not equal to that of the first satellite of former astronomers, which lies immediately beyond it.

Saturn. The planet Saturn is now observed to have belts or fascize upon its disk as distinctly as Jupiter. Dr Herschel, on the 9th of April 1775, observed a northern belt on his body, inclined a little to the line of the ring. On the 1st of May 1776, there was another belt observed, inclined about 15° to the same line, but more to the south; and on the following side came up to the place where the ring crosses the body of the planet. — On the 8th of April two belts were observed, and these continued with variations, and sometimes the appearance of a third belt, till the 8th of September, when the account of the observations was discontinued. The Doctor remarks, that he generally observed these belts in equatorial situations, though sometimes it was otherwise. Two conclusions, he says, may be drawn from the observations he made this year. "The first, which relates to the changes in the appearance of the belts, is, that Saturn has probably a very considerable atmosphere, in which these changes take place, just as the alterations in the belts of Jupiter have been shewn with great probability to be in his atmosphere. This has also been confirmed by other observations. Thus, in occultations of Saturn's satellites, I have found them to hang to the disk for a long while before they would vanish. And though we ought to make some allowance for the encroachment of light, whereby a satellite is seen to reach up to the disk sooner than it actually does, yet without a considerable refraction it could hardly be kept so long in view after the apparent contact. The time of hanging upon the disk in the seventh satellite has actually amounted to 20 minutes. Now, as its quick motion during that interval carries it through an arch of near six degrees, we find that this would denote a refraction of about two seconds, provided the encroaching of light had no share in producing the effect. By an observation of the sixth satellite, the refraction of Saturn's atmosphere amounts to nearly the same quantity; for this satellite remained about 14 or 15 minutes longer in view than it should have done; and as it moves about $2\frac{1}{2}$ degrees in that time, and its orbit is larger than that of the seventh, the difference is inconsiderable. The next inference we may draw from the appearance of the belts on Saturn is, that this planet turns upon an axis which is perpendicular to his ring. The arrangement of the belts, during the course of 14 years that I have observed them, has always followed the direction of the ring, which is what I have called *being equatorial*. Thus, as the ring opened, the belts began to advance towards the south, and to show an incurvature answering to the projection of an equatorial line, or to a parallel of the same. When the ring closed up, they returned towards the north, and are now, while the ring passes over the centre, exactly ranging with the shadow of it, on the body, generally one on each side, with a white belt close to it. When I say that the belts have always been equatorial, I pass over trifling exceptions, which certainly were owing to local causes. The step from equatorial belts to a rotation on an axis is so easy, and, in the case of Jupiter, so well ascertained, that I shall not hesitate to take the same consequence for granted here. But if there could remain a doubt, the observations of June 19th, 20th, and 21st, 1780, where the same spot upon one of the belts was seen in three different situations, would remove it completely."

Saturn.

Another evidence that Saturn, as well as the other planets, revolves upon its axis, is drawn from its flattened shape, like that of Mars, Jupiter, and Saturn. On the 31st of May 1781, the disk seemed to deviate as much from a true circle as that of Jupiter, though by the interference of the ring this could not be so well determined as after an interval of eight years. On the 18th of August 1787, the difference between the equatorial and polar diameters was measured, the mean of three observations of the former being $22''.81$, of the latter $20''.61$. From these observations, it appears that the polar diameter of Saturn is to his equatorial diameter nearly as 10 to 11; and that his axis is perpendicular to the plane of the ring.

In a subsequent paper, the Doctor gives up his reasoning against fixed lucid points in the ring, in consequence of having frequently observed them in such situations as could not by any means be accounted for by the satellites. He even attempts to invalidate his own arguments above-mentioned concerning the vast magnitude of the mountains necessary to make them visible at this distance. "As observations (says he) carefully made should always take the lead of theories, I shall not be concerned if such lucid spots as I am now going to admit, should seem to contradict what has been said in my last paper concerning the idea of inequalities or protuberant points. We may, however, remark, that a lucid and apparently protuberant point may exist without any great inequality in the ring. A vivid light, for instance, will seem to project greatly beyond the limits of the body on which it is placed. If, therefore, the luminous places on the ring should be such as proceed from very bright reflecting regions, or, which is more probable, owe their existence to the more fluctuating causes of inherent fires acting with great violence, we need not imagine the ring of Saturn to be very uneven or distorted, in order to present us with such appearances. In this sense of the word, then, we may still oppose the idea of protuberant points, such as would denote immense mountains of elevated surface.

"On comparing together several observations, a few trials shew that the brightest and best observed spot agrees to a revolution of $10^h 32' 15''.4$; and calculating its distance from the centre of Saturn, on a supposition of its being a satellite, we find it $17''.227$, which brings it upon the ring. It is therefore certain, that unless we should imagine the ring to be sufficiently fluid to allow a satellite to revolve in it, or suppose a notch, groove, or division in the ring, to suffer the satellite to pass along, we ought to admit a revolution of the ring itself. The density of the ring, indeed, may be supposed to be very inconsiderable by those who imagine its light to be rather the effect of some shining fluid, like an aurora borealis, than a reflection from some permanent substance; but its disappearance, in general, and in my telescopes its faintness, when turned edgewise, are in no manner favourable to this idea.—When we add also, that this ring casts a deep shadow upon the planet, is very sharply defined both in its outer and inner edge, and in brightness exceeds the planet itself, it seems to be almost proved that its consistence cannot be less than the body of Saturn, and that consequently no degree of fluidity can be admitted sufficient to permit a revolving body to keep in motion for any length of time. A groove might afford a pas-

sage, especially as on a former occasion we have already considered the idea of a divided ring. A circumstance also which seems rather to favour this idea, is, that in some observations a bright spot has been seen to project equally on both sides, as the satellites have been observed to do when they passed the ring. But, on the other hand, we ought to consider, that the spot has often been observed very near the end of the arms of Saturn's ring, and that the calculated distance is consequently a little too small for such appearances, and ought to be 19 or 20 seconds at least. We should also attend to the size of the spot, which seems to be variable: for it is hardly to be imagined that a satellite, brighter than the sixth, and which could be seen with the moon nearly at full, should so often escape our notice in its frequent revolutions, unless it varied much in its apparent brightness. To this we must add another argument drawn from the number of lucid spots, which will not agree with the motion of one satellite only; whereas, by admitting a revolution of the ring itself in $10^h 32' 15''.4$, and supposing all the spots to adhere to the ring, and to share in the same periodical return, provided they last long enough to be seen many times, we shall be able to give an easy solution of all the remaining phenomena. See Phil. Transf. 1790, p. 427.

SATURN, in chemistry, an appellation given to lead.

SATURN, in heraldry, denotes the black colour in blazoning the arms of sovereign princes.

SATURN, one of the principal of the Pagan deities, was the son of Cœlus and Terra, and the father of Jupiter. He deposed and castrated his father; and obliged his brother Titan to resign his crown to him, on condition of his bringing up none of his male issue, that the succession might at length devolve on him. For this purpose he devoured all the sons he had by his wife Rhea or Cybele: but she bringing forth at one time Jupiter and Juno, she presented the latter to her husband, and sent the boy to be nursed on mount Ida; when Saturn being informed of her having a son, demanded the child; but in his stead his wife gave him a stone swaddled up like an infant, which he instantly swallowed. Titan finding that Saturn had violated the contract he had made with him, put himself at the head of his children, and made war on his brother, and having made him and Cybele prisoners, confined them in Tartarus: but Jupiter being in the mean time grown up, raised an army in Crete, went to his father's assistance, defeated Titan, and restored Saturn to the throne. Some time after, Saturn being told that Jupiter intended to dethrone him, endeavoured to prevent it; but the latter being informed of his intention, deposed his father, and threw him into Tartarus. But Saturn escaping from thence fled into Italy, where he was kindly received by Janus king of the country, who associated him to the government: whence Italy obtained the name of *Saturnia Tellus*; as also that of *Latium*, from *latio*, "to lie hid." There Saturn, by the wisdom and mildness of his government, is said to have produced the golden age.

Saturn is represented as an old man with four wings, armed with a scythe; sometimes he is delineated under the figure of a serpent with its tail in its mouth. This is emblematic of the seasons, which roll perpetually in the same circle. Sometimes also Saturn is painted with

Saturn.

Saturnalia
||
Sat'yavrata.

with a sand-glass in his hand. The Greeks say, that the story of his mutilating his father and destroying his children is an allegory, which signifies, that Time devours the past and present, and will also devour the future. The Romans, in honour of him, built a temple and celebrated a festival, which they called *Saturnalia*. During this festival no business or profession was allowed to be carried on except cookery; all distinctions of rank ceased; slaves could say what they pleased to their masters with impunity; they could even rally them with their faults before their faces.

SATURNALIA, in Roman antiquity, a festival observed about the middle of December, in honour of the god Saturn, whom Lucan introduces giving an account of the ceremonies observed on this occasion, thus. "During my whole reign, which lasts but for one week, no public business is done; there is nothing but drinking, singing, playing, creating imaginary kings, placing servants with their masters at table, &c. There shall be no disputes, reproaches, &c. but the rich and poor, masters and slaves, shall be equal," &c.

On this festival the Romans sacrificed bare-headed, contrary to their custom at other sacrifices.

SATURNINE, an appellation given to persons of a melancholy disposition, as being supposed under the influence of the planet Saturn.

SATURNITE, a name given by Mr Kirwan to a new metallic substance, supposed to be discovered by M. Monnet. It was met with in some lead founderies at a place named *Poulla oven* in Brittany; being separated from the lead ore during its torrefaction. It resembles lead in colour, weight, solubility in acids and other properties, but differs from it in being more fusible, brittle, easily scorified and volatilized, and likewise not being miscible with lead in fusion. Messieurs Hassenfratz and Girond contended, that this saturnite was nothing but a compound of different substances, and accordingly gave an analysis of it as consisting of lead, copper, iron, silver, and sulphur; the proportions of which must naturally vary according to the quality of the ore put into the furnace. M. Monnet, however, insisted that the substance analysed by them was not that which he had discovered; but when he again visited the mines above-mentioned, he could meet with none of the substance there which he found before.

SATYAVRATA, or **MENU**, in Indian mythology, is believed by the Hindoos to have reigned over the whole world in the earliest age of their chronology, and to have resided in the country of Dravira on the coast of the eastern Indian peninsula. His patronymic name was *Vaivasvata*, or *child of the sun*. In the *Bhagavat* we are informed, that the Lord of the Universe, intending to preserve him from the sea of destruction, caused by the depravity of the age, thus told him how he was to act. "In seven days from the present time, O thou tamer of enemies, the three worlds will be plunged in an ocean of death; but, in the midst of the destroying waves, a large vessel, sent by me for thy use, shall stand before thee. Then shalt thou take all medicinal herbs, all the variety of seeds; and, accompanied by seven saints, encircled by pairs of all brute animals, thou shalt enter the spacious ark and continue in it, secure from the flood on one immense ocean without light, except the radiance of thy holy companions. When the ship shall be agitated by an impetuous wind, thou

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shalt fasten it with a large sea-serpent on my horn; for I will be near thee: drawing the vessel, with thee and thy attendants, I will remain on the ocean, O chief of men, until a night of Brahmá shall be completely ended. Thou shalt then know my true greatness, rightly named the supreme Godhead; by my favour, all thy questions shall be answered, and thy mind abundantly instructed." All this is said to have been accomplished; and the story is evidently that of Noah disguised by Asiatic fiction and allegory. It proves, as Sir William Jones has rightly observed, an ancient Indian tradition of the universal deluge described by Moses; and enables us to trace the connection between the eastern and western traditions relating to that event. The same learned author has shown it to be in the highest degree probable, that the *Satyavrata* of India is the *Cronus* of Greece and the *Saturn* of Italy. See **SATURN**; and *Asiatic Researches*, Vol. I. p. 230, &c.

SATYR, or **SATIRE**, in matters of literature, a discourse or poem, exposing the vices and follies of mankind. See **POETRY**, Part II. Sect. x.

The chief satirists among the ancients are, Horace, Juvenal, and Persius: those among the moderns, are, Regnier and Boileau, in French; Butler, Dryden, Rochester, Buckingham, Swift, Pope, Young, &c. among the English; and Cervantes among the Spaniards.

SATYRIASIS. See **MEDICINE**, n° 372.

SATYRIUM, in botany: A genus of the diandria order, belonging to the gynandria class of plants; and in the natural method ranking under the 42d order, *Verticillatæ*. The nectarium is serotiform, or inflated double behind the flower.

SATYRS (in ancient mythology), a species of demi-gods who dwelt in the woods. They are represented as monsters, half-men, and half-goats; having horns on their heads, a hairy body, with the feet and tail of a goat. They are generally in the train that follows Bacchus. As the poets supposed that they were remarkable for piercing eyes and keen raillery, they have placed them in the same pictures with the Graces, Loves, and even with Venus herself.

SAVAGE (Richard), one of the most remarkable characters that is to be met with perhaps in all the records of biography, was the son of Anne countess of Macclesfield by the earl of Rivers, according to her own confession; and was born in 1698. This confession of adultery was made in order to procure a separation from her husband the earl of Macclesfield: yet, having obtained this desired end, no sooner was her spurious offspring brought into the world, than, without the dread of shame or poverty to excuse her, she discovered the resolution of disowning him; and, as long as he lived, treated him with the most unnatural cruelty. She delivered him over to a poor woman to educate as her own; prevented the earl of Rivers from leaving him a legacy of L. 6000, by declaring him dead; and in effect deprived him of another legacy which his godmother Mrs Lloyd had left him, by concealing from him his birth, and thereby rendering it impossible for him to prosecute his claim. She endeavoured to send him secretly to the plantations; but this plan being either laid aside or frustrated, she placed him apprentice with a shoemaker. In this situation, however, he did not long continue: for his nurse dying, he went to take care of the effects of his supposed mother; and found in

Satyr
||
Savage.

Savage. her boxes some letters which discovered to young Savage his birth, and the cause of its concealment.

From the moment of this discovery it was natural for him to become dissatisfied with his situation as a shoemaker. He now conceived that he had a right to share in the affluence of his real mother; and therefore he directly, and perhaps indiscreetly, applied to her, and made use of every art to awaken her tenderness and attract her regard. But in vain did he solicit this unnatural parent; she avoided him with the utmost precaution, and took measures to prevent his ever entering her house on any pretence whatever.

Savage was at this time so touched with the discovery of his birth, that he frequently made it his practice to walk before his mother's door in hopes of seeing her by accident; and often did he warmly solicit her to admit him to see her; but all to no purpose: he could neither soften her heart nor open her hand.

Mean time, while he was assiduously endeavouring to rouse the affections of a mother in whom all natural affection was extinct, he was destitute of the means of support, and reduced to the miseries of want. We are not told by what means he got rid of his obligation to the shoemaker, or whether he ever was actually bound to him; but we now find him very differently employed in order to procure a subsistence. In short, the youth had parts, and a strong inclination towards literary pursuits, especially poetry. He wrote a poem; and afterwards two plays, *Woman's a Riddle* and *Love in a Veil*: but the author was allowed no part of the profits from the first; and from the second he received no other advantage than the acquaintance of Sir Richard Steel and Mr Wilks, by whom he was pitied, caressed, and relieved. However, the kindness of his friends not affording him a constant supply, he wrote the tragedy of *Sir Thomas Overbury*; which not only procured him the esteem of many persons of wit, but brought him in 200*l.* The celebrated Aaron Hill, Esq; was of great service to him in correcting and fitting this piece for the stage and the press; and extended his patronage still farther. But Savage was, like many other wits, a bad manager, and was ever in distress. As fast as his friends raised him out of one difficulty, he sunk into another; and, when he found himself greatly involved, he would ramble about like a vagabond, with scarce a shirt on his back. He was in one of these situations all the time wherein he wrote his tragedy above-mentioned; without a lodging, and often without a dinner: so that he used to scribble on scraps of paper picked up by accident, or begged in the shops, which he occasionally stepped into, as thoughts occurred to him, craving the favour of pen and ink, as it were just to take a memorandum.

Mr Hill also earnestly promoted a subscription to a volume of *Miscellanies*, by Savage; and likewise furnished part of the poems of which the volume was composed. To this miscellany Savage wrote a preface, in which he gives an account of his mother's cruelty, in a very uncommon strain of humour.

The profits of his Tragedy and his *Miscellanies* together, had now, for a time, somewhat raised poor Savage both in circumstances and credit; so that the world just began to behold him with a more favourable eye than formerly, when both his fame and life were endangered by a most unhappy event. A drunken frolic

in which he one night engaged, ended in a fray, and Savage unfortunately killed a man, for which he was condemned to be hanged; his friends earnestly solicited the mercy of the crown, while his mother as earnestly exerted herself to prevent his receiving it. The counts of Hertford at length laid his whole case before queen Caroline, and Savage obtained a pardon.

Savage had now lost that tenderness for his mother, which the whole series of her cruelty had not been able wholly to repress; and considering her as an implacable enemy, whom nothing but his blood could satisfy, threatened to harass her with lampoons, and to publish a copious narrative of her conduct, unless she consented to allow him a pension. This expedient proved successful; and the lord Tyrconnel, upon his promise of laying aside his design of exposing his mother's cruelty, took him into his family, treated him as an equal, and engaged to allow him a pension of 200*l.* a-year. This was the golden part of Savage's life. He was courted by all who endeavoured to be thought men of genius, and caressed by all who valued themselves upon a refined taste. In this gay period of his life he published the *Temple of Health and Mirth*, on the recovery of lady Tyrconnel from a languishing illness; and *The Wanderer*, a moral poem, which he dedicated to lord Tyrconnel, in strains of the highest panegyric: but these praises he in a short time found himself inclined to retract, being discarded by the man on whom they were bestowed. Of this quarrel lord Tyrconnel and Mr Savage assigned very different reasons. Our author's known character pleads too strongly against him; for his conduct was ever such as made all his friends, sooner or later, grow weary of him, and even forced most of them to become his enemies.

Being thus once more turned adrift upon the world, Savage, whose passions were very strong, and whose gratitude was very small, became extremely diligent in exposing the faults of lord Tyrconnel. He, moreover, now thought himself at liberty to take revenge upon his mother.—Accordingly he wrote *The Bastard*, a poem, remarkable for the vivacity of its beginning (where he finely enumerates the imaginary advantages of base birth), and for the pathetic conclusion, wherein he recounts the real calamities which he suffered by the crime of his parents.—The reader will not be displeased with a transcript of some of the lines in the opening of the poem, as a specimen of this writer's spirit and manner of versification.

Blest be the bastard's birth! thro' wondrous ways,
He shines eccentric like a comet's blaze.
No sickly fruit of faint compliance he;
He! stamp'd in nature's mint with ecstasy!
He lives to build, not boast, a gen'rous race;
No tenth transmitter of a foolish face.
He, kindling from within, requires no flame,
He glories in a bastard's glowing name.
—Nature's unbounded son, he stands alone,
His heart unbias'd, and his mind his own.
—O mother! yet no mother!—'tis to you
My thanks for such distinguish'd claims are due.

This poem had an extraordinary sale; and its appearance happening at the time when his mother was at Bath, many persons there took frequent opportunities of repeating passages from the *Bastard* in her hearing.

Savage. ing. This was perhaps the first time that ever she discovered a sense of shame, and on this occasion the power of wit was very conspicuous: the wretch who had, without scruple, proclaimed herself an adulteress, and who had first endeavoured to starve her son, then to transport him, and afterwards to hang him, was not able to bear the representation of her own conduct; but fled from reproach, though she felt no pain from guilt; and left Bath with the utmost haste, to shelter herself among the crowds of London (A).

Some time after this, Savage formed the resolution of applying to the queen; who having once given him life, he hoped she might farther extend her goodness to him by enabling him to support it.—With this view, he published a poem on her birth-day, which he entitled *The Volunteer-Laureat*; for which she was pleased to send him 50 l. with an intimation that he might annually expect the same bounty. But this annual allowance was nothing to a man of his strange and singular extravagance. His usual custom was, as soon as he had received his pension, to disappear with it, and secrete himself from his most intimate friends, till every shilling of the 50 l. was spent; which done, he again appeared, penniless as before: But he would never inform any person where he had been, nor in what manner his money had been dissipated.—From the reports, however, of some who found means to penetrate his haunts, it would seem that he expended both his time and his cash in the most sordid and despicable sensuality; particularly in eating and drinking, in which he would indulge in the most unsocial manner, sitting whole days and nights by himself, in obscure houses of entertainment, over his bottle and trencher, immersed in filth and sloth, with scarce decent apparel; generally wrapped up in a horseman's great coat; and, on the whole, with his very homely countenance, and altogether, exhibiting an

object the most disgusting to the sight, if not to some other of the senses.

His wit and parts, however, still raised him new friends as fast as his misbehaviour lost him his old ones. Yet such was his conduct, that occasional relief only furnished the means of occasional excess; and he defeated all attempts made by his friends to fix him in a decent way. He was even reduced so low as to be destitute of a lodging; insomuch that he often passed his nights in those mean houses that are set open for casual wanderers; sometimes in cellars amidst the riot and filth of the most profligate of the rabble; and not seldom would he walk the streets till he was weary, and then lie down in summer on a bulk, or in winter with his associates among the ashes of a glass-house.

Yet, amidst all his penury and wretchedness, had this man so much pride, and so high an opinion of his own merit, that he ever kept up his spirits, and was always ready to repress, with scorn and contempt, the least appearance of any slight or indignity towards himself, in the behaviour of his acquaintance; among whom he looked upon none as his superior. He would be treated as an equal, even by persons of the highest rank. We have an instance of this preposterous and inconsistent pride, in his refusing to wait upon a gentleman who was desirous of relieving him when at the lowest ebb of distress, only because the message signified the gentleman's desire to see him at nine in the morning. Savage could not bear that any one should presume to prescribe the hour of his attendance, and therefore he absolutely rejected the proffered kindness. This life, unhappy as it may be already imagined, was yet rendered more unhappy, by the death of the queen, in 1738; which stroke deprived him of all hopes from the court. His pension was discontinued, and the insolent manner in which he demanded of Sir Robert Walpole

(A) Mr Boswell, in his life of Dr Johnson, has called in question the story of Savage's birth, and grounded his suspicion on two mistakes, or, as he calls them, falsehoods, which he thinks he has discovered in his friend's memoirs of that extraordinary man. Johnson has said, that the earl of Rivers was Savage's godfather, and gave him his own name; which, by his direction, was inserted in the register of the parish of St Andrew's, Holborn. Part of this, it seems, is not true; for Mr Boswell carefully inspected that register, but no such entry is to be found. But does this omission amount to a proof, that the person who called himself *Richard Savage* was an impostor, and not the son of the earl of Rivers and the countess of Macclesfield? Mr Boswell thinks it does; and, in behalf of his opinion, appeals to the maxim *falsum in uno, falsum in omnibus*. The solidity of this maxim may be allowed by others; but it was not without surprise that, on such an occasion, we found it adopted by the biographer of Johnson. To all who have compared his view of a celebrated cause, with Stuart's letters on the same subject addressed to Lord Mansfield, it must be apparent, that, at one period of his life, he would not have deemed a thousand such mistakes sufficient to invalidate a narrative otherwise so well authenticated as that which relates the birth of Savage. The truth is, that the omission of the name in the register of St Andrew's may be easily accounted for, without bringing against the wretched Savage an accusation of imposture, which neither his mother nor her friends dared to urge when provoked to it by every possible motive that can influence human conduct. The earl of Rivers would undoubtedly give the direction about registering the child's name to the same person whom he entrusted with the care of his education; but that person, it is well known, was the countess of Macclesfield, who, as she had resolved from his birth to disown her son, would take care that the direction should not be obeyed.

That which, in Johnson's life of Savage, Mr Boswell calls a second falsehood, seems not to amount even to a mistake. It is there stated, that "Lady Macclesfield having lived for some time upon very uneasy terms with her husband, thought a public confession of adultery the most obvious and expeditious method of obtaining her liberty." This Mr Boswell thinks cannot be true; because, having perused the journals of both houses of parliament at the period of her divorce, he there found it authentically ascertained, that so far from voluntarily submitting to the ignominious charge of adultery, she made a strenuous defence by her counsel. But what is this to the purpose? Johnson has nowhere said, that she confessed her adultery at the

Savage. Walpole to have it restored, for ever cut off this considerable supply; which possibly had been only delayed, and might have been recovered by proper application.

His distress now became so great, and so notorious, that a scheme was at length concerted for procuring him a permanent relief. It was proposed that he should retire into Wales, with an allowance of 50*l.* *per annum*, on which he was to live privately, in a cheap place, for ever quitting his town-haunts, and resigning all farther pretensions to fame. This offer he seemed gladly to accept; but his intentions were only to deceive his friends, by retiring for a while, to write another tragedy, and then to return with it to London in order to bring it upon the stage.

In 1739, he set out for Swansea, in the Bristol stage-coach, and was furnished with 15 guineas to bear the expence of his journey. But, on the 14th day after his departure, his friends and benefactors, the principal of whom was no other than the great Mr Pope, who expected to hear of his arrival in Wales, were surprised with a letter from Savage, informing them that he was yet upon the road, and could not proceed for want of money. There was no other remedy than a remittance; which was sent him, and by the help of which he was enabled to reach Bristol, from whence he was to proceed to Swansea by water. At Bristol, however, he found an embargo laid upon the shipping; so that he could not immediately obtain a passage. Here, therefore, being obliged to stay for some time, he, with his usual facility, so ingratiated himself with the principal inhabitants, that he was frequently invited to their houses, distinguished at their public entertainments, and treated with a regard that highly gratified his vanity, and therefore easily engaged his affections. At length, with great reluctance, he proceeded to Swansea; where he lived about a year, very much dissatisfied with the

diminution of his salary; for he had, in his letters, treated his contributors so insolently, that most of them withdrew their subscriptions. Here he finished his tragedy, and resolved to return with it to London: which was strenuously opposed by his great and constant friend Mr Pope; who proposed that Savage should put this play into the hands of Mr Thomson and Mr Mallet, in order that they might fit it for the stage, that his friends should receive the profits it might bring in, and that the author should receive the produce by way of annuity. This kind and prudent scheme was rejected by Savage with the utmost contempt.—He declared he would not submit his works to any one's correction; and that he would no longer be kept in leading-strings. Accordingly he soon returned to Bristol, in his way to London; but at Bristol, meeting with a repetition of the same kind treatment he had before found there, he was tempted to make a second stay in that opulent city for some time. Here he was again not only caressed and treated, but the sum of 30*l.* was raised for him, with which it had been happy if he had immediately departed for London: But he never considered that a frequent repetition of such kindness was not to be expected, and that it was possible to tire out the generosity of his Bristol friends, as he had before tired his friends everywhere else. In short, he remained here till his company was no longer welcome. His visits in every family were too often repeated; his wit had lost its novelty, and his irregular behaviour grew troublesome. Necessity came upon him before he was aware; his money was spent, his clothes were worn out, his appearance was shabby, and his presence was disgusting at every table. He now began to find every man from home at whose house he called; and he found it difficult to obtain a dinner. Thus reduced, it would have been prudent in him to have withdrawn from the place; but prudence and Savage were never acquainted.

the bar of either house of parliament, but only that her confession was *public*; and as he has taught us in his Dictionary, that whatever is *notorious* or *generally* known is *public*; public, in his sense of the word, that confession certainly was, if made to different individuals, in such a manner as showed that she was not anxious to conceal it from her husband, or to prevent its notoriety. She might, however, have very cogent reasons for denying her guilt before parliament, and for making a strenuous defence by her counsel; as indeed, had she acted otherwise, it is very little probable that her great fortune would have been restored to her, or that she could have obtained a second husband.

But Mr Boswell is of opinion, that the person who assumed the name of Richard Savage was the son of the shoemaker under whose care Lady Macclesfield's child was placed; because "his not being able to obtain payment of Mrs Lloyd's legacy must be imputed to his consciousness that he was not the real person to whom that legacy was left." He must have a willing mind who can admit this argument as a proof of imposture. Mrs Lloyd died when Savage was in his 10th year, when he certainly did not know or suspect that he was the person for whom the legacy was intended, when he had none to prosecute his claim, to shelter him from oppression, or to call in law to the assistance of justice. In such circumstances he could not have obtained payment of the money, unless the executors of the will had been inspired from heaven with the knowledge of the person to whom it was due.

To these and a thousand such idle cavils it is a sufficient answer, that Savage was acknowledged and patronized as Lady Macclesfield's son by Lord Tyrconnel, who was that lady's nephew; by Sir Richard Steel the intimate friend of colonel Brett, who was that lady's second husband; by the Queen, who, upon the authority of that lady and her creatures, once thought Savage capable of entering his *mother's* house in the night with an intent to murder her; and in effect by *the lady herself*, who at one time was prevailed upon to give him 50*l.* and who fled before the Satire of the *Bastard*, without offering, either by herself or her friends, to deny that the author of that poem was the person whom he called himself, or to insinuate so much as that he might *possibly* be the son of a shoemaker. To Mr Boswell all this seems *strange*: to others, who look not with so keen an eye for supposititious births, we think it must appear *convincing*.

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acquainted. He staid, in the midst of poverty, hunger, and contempt, till the mistress of a coffee-house, to whom he owed about eight pounds, arrested him for the debt. He remained for some time, at a great expence, in the house of the sheriff's officer, in hopes of procuring bail; which expence he was enabled to defray, by a present of five guineas from Mr Nash at Bath. No bail, however, was to be found; so that poor Savage was at last lodged in Newgate, a prison so named in Bristol.

But it was the fortune of this extraordinary mortal always to find more friends than he deserved. The keeper of the prison took compassion on him, and greatly softened the rigours of his confinement by every kind of indulgence; he supported him at his own table, gave him a commodious room to himself, allowed him to stand at the door of the gaol, and even frequently took him into the fields for the benefit of the air and exercise: so that, in reality, Savage endured fewer hardships in this place than he had usually suffered during the greatest part of his life.

While he remained in this not intolerable prison, his ingratitude again broke out, in a bitter satire on the city of Bristol; to which he certainly owed great obligations, notwithstanding the circumstances of his arrest; which was but the act of an individual, and that attended with no circumstances of injustice or cruelty. This satire he entitled *London and Bristol delineated*; and in it he abused the inhabitants of the latter, with such a spirit of resentment, that the reader would imagine he had never received any other than the most injurious treatment in that city.

When Savage had remained about six months in this hospitable prison, he received a letter from Mr Pope, (who still continued to allow him 20 l. a-year) containing a charge of very atrocious ingratitude. What were the particulars of this charge we are not informed; but, from the notorious character of the man, there is reason to fear that Savage was but too justly accused. He, however, solemnly protested his innocence; but he was very unusually affected on this occasion. In a few days after, he was seized with a disorder, which at first was not suspected to be dangerous: but growing daily more languid and dejected, at last a fever seized him; and he expired on the 1st of August 1743, in the 46th year of his age.

Thus lived, and thus died, Richard Savage, Esq; leaving behind him a character strangely chequered with vices and good qualities. Of the former we have seen a variety of instances in this abstract of his life; of the latter, his peculiar situation in the world gave him but few opportunities of making any considerable display. He was, however, undoubtedly a man of excellent parts; and had he received the full benefits of a liberal education, and had his natural talents been cultivated to the best advantage, he might have made a respectable figure in life. He was happy in a quick discernment, a retentive memory, and a lively flow of wit, which made his company much coveted; nor was his judgment both of writings and of men inferior to his wit: but he was too much a slave to his passions, and his passions were too easily excited. He was warm in his friendships, but implacable in his enmity; and his greatest fault, which is indeed the greatest of all faults, was ingratitude. He seemed to think every thing due

to his merit, and that he was little obliged to any one for those favours which he thought it their duty to confer on him: it is therefore the less to be wondered at, that he never rightly estimated the kindness of his many friends and benefactors, or preserved a grateful and due sense of their generosity towards him.

The works of this original writer, after having long lain dispersed in magazines and fugitive publications, have been lately collected and published in an elegant edition, in 2 vols 8vo; to which are prefixed, the admirable *Memoirs of Savage*, written by Dr Samuel Johnson.

SAVAGE is a word so well understood as scarcely to require explanation. When applied to inferior animals, it denotes that they are wild, untamed, and cruel; when applied to man, it is of much the same import with *barbarian*, and means a person who is untaught and uncivilized, or who is in the rude state of uncultivated nature. That such men exist at present, and have existed in most ages of the world, is undeniable; but a question naturally occurs respecting the origin of this savage state, the determination of which is of considerable importance in developing the nature of man, and ascertaining the qualities and powers of the human mind. Upon this subject, as upon most others, opinions are very various, and the systems built upon them are consequently very contradictory. A large sect of ancient philosophers maintained that man sprung at first from the earth like his brother vegetables; that he was without ideas and without speech; and that many ages elapsed before the race acquired the use of language, or attained to greater knowledge than the beasts of the forest. Other sects again, with the vulgar, and almost all the poets, maintained that the first mortals were wiser and happier, and more powerful, than any of their offspring; that mankind, instead of being originally savages, and rising to the state of civilization by their own gradual and progressive exertions, were created in a high degree of perfection; that, however, they degenerated from that state, and that all nature degenerated with them. Hence the various ages of the world have almost everywhere been compared to gold, silver, brass, and iron, the golden having been always supposed to be the first age.

Since the revival of letters in Europe, and especially during the present century, the same question has been much agitated both in France and England, and by far the greater part of the most fashionable names in modern science have declared for the original savagism of men. Such of the ancients as held that opinion were countenanced by the atheistic cosmogony of the Phœnicians, and by the early history of their own nations; the moderns build their system upon what they suppose to be the constitution of the human mind, and upon the late improvements in arts and sciences. As the question must finally be decided by historical evidence, before we make our appeal to facts, we shall consider the force of the modern reasonings from the supposed innate powers of the human mind; for that reasoning is totally different from the other, and to blend them together would only prevent the reader from having an adequate conception of either.

Upon the supposition that all mankind were originally savages, destitute of the use of speech, and, in the strictest sense of the words, *mutum et turpe pecus*, the great

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great difficulty is to conceive how they could emerge from that state, and become at last enlightened and civilized. The modern advocates for the universality of the savage state remove this difficulty by a number of instincts or internal senses, with which they suppose the human mind endowed, and by which the savage is, without reflection, not only enabled to distinguish between right and wrong, and prompted to do every thing necessary to the preservation of his existence, and the continuance of the species, but also led to the discovery of what will contribute, in the first instance, to the ease and accommodations of life. These instincts, they think, brought mankind together when the reasoning faculty, which had hitherto been dormant, being now roused by the collisions of society, made its observations upon the consequences of their different actions, taught them to avoid such as experience showed to be pernicious, and to improve upon those which they found beneficial; and thus was the progress of civilization begun. But this theory is opposed by objections which we know not how to obviate. The bundle of instincts with which modern idleness, under the denomination of philosophy, has so amply furnished the human mind, is a mere chimera. (See INSTINCT.) But granting its reality, it is by no means sufficient to produce the consequences which are derived from it. That it is not the parent of language, we have shown at large in another place (see LANGUAGE, n° 1—7.); and we have the confession of some of the ablest advocates for the original savagism of man, that large societies must have been formed before language could have been invented. How societies, at least large societies, could be formed and kept together without language, we have not indeed been told; but we are assured by every historian and every traveller of credit, that in such societies only have mankind been found civilized. Among known savages the social storge is very much confined; and therefore, had it been in the first race of men of as enlarged a nature, and as safe a guide, as the instinctive philosophers contend that it was, it is plain that those men could not have been savages. Such an appetite for society, and such a director of conduct, instead of enabling mankind to have emerged from savagism, would have effectually prevented them from ever becoming savage; it would have knit them together from the very first, and furnished opportunities for the progenitors of the human race to have begun the process of civilization from the moment that they dropt from the hands of their Creator. Indeed, were the modern theories of internal senses and social affections well founded, and were these senses and affections sufficient to have impelled the first men into society, it is not easy to be conceived how there could be at this day a savage tribe on the face of the earth. Natural causes, operating in the same direction and with the same force, must in every age produce the same effects; and if the social affections of the first mortals impelled them to society, and their reasoning faculties immediately commenced the process of civilization, surely the same affections and the same faculties would in a greater or less degree have had the same effect in every age and on every tribe of their numerous offspring; and we should everywhere observe mankind advancing in civilization, instead of standing still as they often do, and sometimes retreating by a retrograde motion. This, however, is far from being the case. Hordes of savages exist in al-

most every quarter of the globe; and the Chinese, who have undoubtedly been in a state of civilization for at least 2000 years, have during the whole of that long period been absolutely stationary, if they have not lost some of their ancient arts. (See PORCELAIN). The origin of civilization, therefore, is not to be looked for in human instincts or human propensities, carrying men forward by a natural progress; for the supposition of such propensities is contrary to fact; and by fact and historical evidence, in conjunction with what we know of the nature of man, must this great question be at last decided.

In the article RELIGION, n° 7. it has been shewn that the first men, if left to themselves without any instruction, instead of living the life of savages, and in process of time advancing towards civilization, must have perished before they acquired even the use of some of their senses. In the same article it has been shown (n° 14—17.), that Moses, as he is undoubtedly the oldest historian extant, wrote likewise by immediate inspiration; and that therefore, as he represents our first parents and their immediate descendants as in a state far removed from that of savages, it is vain to attempt to deduce the originality of such a state from hypothetical theories of human nature. We have, indeed, heard it observed by some of the advocates for the antiquity and universality of the savage state, that to the appeal to revelation they have no objection, provided we take the Mosaic account as it stands, and draw not from it conclusions which it will not support.

They contend, at the same time, that there is no argument fairly deducible from the book of Genesis which militates against their position. Now we beg leave to remark, that besides the reasoning which we have already used in the article just referred to, we have as much positive evidence against their position as the nature of the Mosaic history could be supposed to afford.

We are there told that God created man after his own image; that he gave him dominion over every thing in the sea, in the air, and over all the earth; that he appointed for his food various kinds of vegetables; that he ordained the Sabbath to be observed by him, in commemoration of the works of creation; that he prepared for him a garden to till and to dress; and that, as a test of his religion and submission to his Creator, he forbade him, under severe penalties, to eat of a certain tree in that garden. We are then told that God brought to him every animal which had been created; and we find that Adam was so well acquainted with their several natures as to give them names. When too an helpmate was provided for him, he immediately acknowledged her as bone of his bone, flesh of his flesh, and called her *woman*, because she was taken out of man.

How these facts can be reconciled to a state of ignorant savagism is to us absolutely inconceivable; and it is indeed strange, that men who profess Christianity should appeal to reason, and stick by its decision on a question which revelation has thus plainly decided against them. But it is agreeable to their theory to believe that man rose by slow steps to the full use of his reasoning powers. To us, on the other hand, it appears equally plausible to suppose that our first parents were created, not in full maturity, but mere infants, and that they went through the tedious process of childhood and youth,

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Savage. youth, &c. as to suppose that their minds were created weak, uninformed, and uncivilized, as are those of savages.

But if it be granted that Adam had a tolerable share of knowledge, and some civilization, nothing can be more natural than to suppose that he would teach his descendants what he knew himself; and if the Scriptures are to be believed, we are certain that some of them possessed more than savage knowledge, and better than savage manners. But instead of going on to further perfection, as the theory of modern philosophers would lead us to suppose, we find that mankind degenerated in a most astonishing degree; the causes of which we have already in part developed in the article **POLYTHEISM**, n° 4, &c.

This early degeneracy of the human race, or their sudden progress towards ignorance and savagism, appears to lead to an important consequence. If men so very soon after their creation, possessing, as we have seen they did, a considerable share of knowledge and of civilization, instead of improving in either, degenerated in both respects, it would not appear that human nature has that strong propensity to refinement which many philosophers imagine; or that had all men been originally savage, they would have civilized themselves by their own exertions.

Of the ages before the flood we have no certain account anywhere but in Scripture; where, though we find mankind represented as very wicked, we have no reason to suppose them to have been absolute savages. On the contrary, we have much reason, from the short account of Moses, to conclude that they were far advanced in the arts of civil life. Cain, we are told, built a city; and two of his early descendants invented the harp and organ, and were artificers in brass and iron. Cities are not built, nor musical instruments invented, by savages, but by men highly cultivated: and surely we have no reason to suppose that the righteous posterity of Seth were behind the apostate descendants of Cain in any branch of knowledge that was really useful. That Noah and his family were far removed from savagism, no one will controvert who believes that with them was made a new covenant of religion; and it was unquestionably their duty, as it must otherwise have been their wish, to communicate what knowledge they possessed to their posterity. Thus far then every consistent Christian, we think, must determine against original and universal savagism.

In the preliminary discourse to Sketches of the History of Man, Lord Kames would infer, from some facts which he states, that many pairs of the human race were at first created, of very different forms and natures, but all depending entirely on their own natural talents. But to this statement he rightly observes, that the Mosaic account of the Creation opposes insuperable objections. "Whence then (says his Lordship) the degeneracy of all men into the savage state? To account for that dismal catastrophe, mankind must have suffered some dreadful convulsion." Now, if we mistake not, this is taking for granted the very thing to be proved. We deny that at any period since the creation of the world, all men were sunk into the state of savages; and that they were, no proof has yet been brought, nor do we know of any that can be brought, unless our fashionable philosophers choose to prop their

theories by the buttresses of Sanchoniatho's Phenician cosmogony. (See **SANCHONIATHO**.) His Lordship, however, goes on to say, or rather to *suppose*, that the confusion at Babel, &c. was this dreadful convulsion: For, says he, "by confounding the language of men, and scattering them abroad upon the face of all the earth, they were rendered savages." Here again we have a positive assertion, without the least shadow of proof; for it does not at all appear that the confusion of language, and the scattering abroad of the people, was a circumstance such as could induce universal savagism. There is no reason to think that all the men then alive were engaged in building the tower of Babel; nor does it appear from the Hebrew original that the language of those who were engaged in it was so much changed as the reader is apt to infer from our English version. (See **PHILOLOGY**, n° 8—16.) That the builders were *scattered*, is indeed certain; and if any of them were driven, in very small tribes, to a great distance from their brethren, they would in process of time inevitably become savages. (See **POLYTHEISM**, n° 4—6, and **LANGUAGE**, n° 7.) ; but it is evident, from the Scripture account of the peopling of the earth, that the descendants of Shem and Japheth were not scattered over the face of all the earth, and that therefore they could not be rendered savage by the catastrophe at Babel. In the chapter which relates that wonderful event, the generations of Shem are given in order down to Abram; but there is no indication that they had suffered with the builders of the tower, or that any of them had degenerated into the state of savages. On the contrary, they appear to have possessed a considerable degree of knowledge; and if any credit be due to the tradition which represents the father of Abraham as a statuary, and himself as skilled in the science of astronomy, they must have been far advanced in the arts of refinement. Even such of the posterity of Ham as either emigrated or were driven from the plain of Shinar in large bodies, so far from sinking into savagism, retained all the accomplishments of their antediluvian ancestors, and became afterwards the instructors of the Greeks and Romans. This is evident from the history of the Egyptians and other eastern nations, who in the days of Abraham were powerful and highly civilized. And that for many ages they did not degenerate into barbarism, is apparent from its having been thought to exalt the character of Moses, that he was learned in all the wisdom of the Egyptians, and from the wisdom of Solomon having been said to excel all the wisdom of the east country and of Egypt.

Thus decided are the Scriptures of the Old Testament against the universal prevalence of savagism in that period of the world; nor are the most authentic Pagan writers of antiquity of a different opinion. Mochus the Phenician*, Democritus, and Epicurus, appear to be the first champions of the savage state, and they are followed by a numerous body of poets and rhapsodists, among the Greeks and Romans, who were unquestionably devoted to fable and fiction. The account which they have given of the origin of man, the reader will find in another place (see **THEOLOGY**, Part i. sect. I.) : But we hardly think that he will employ it in support of the fashionable doctrine of original savagism. Against the wild reveries of this school are posted all the leaders of the other sects, Greeks and barbarians; the philosophers

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* Strabo,

lib. xvii.

Diog. Laert.

Vita Democ.

et Vita Epia-

curi.

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sophers of both Academies, the sages of the Italian and Alexandrian schools; the magi of Persia; the Bramins of India, and the Druids of Gaul, &c. The testimony of the early historians among all the ancient nations, indeed, who are avowedly fabulists, is very little to be depended on, and has been called in question by the most judicious writers of Pagan antiquity. (See *Plutarch Vita Thes. sub init. Thucyd.* l. i. cap. i. *Strabo*, l. ii. p. 507. *Livy Pref.* and *Varro ap. August de Civ. Dei.*) The more populous and extensive kingdoms and societies were civilized at a period prior to the records of profane history: the presumption, therefore, without taking revelation into the account, certainly is, that they were civilized from the beginning. This is rendered further probable from other circumstances. To account for their system, the advocates of savagism are obliged, as we have seen, to have recourse to numerous suppositions. They imagine, that since the creation dreadful convulsions have happened, which have spread ruin and devastation over the earth, which have destroyed learning and the arts, and brought on savagism by one sudden blow. But this is reasoning at random, and without a vestige of probability: for the only convulsion that can be mentioned is that at Babel, which we have already shewn to be inadequate.

Further, it does not appear that any people who were once civilized, and in process of time had degenerated into the savage or barbarous state, have ever recovered their pristine condition without foreign aid. From whence we conclude, that man, once a savage, would never have raised himself from that hopeless state. This appears evident from the history of the world; for that it requires strong incitements to keep man in a very high state of knowledge and civilization, is evident from what we know of the numerous nations which were famed in antiquity, but which are now degenerated in an astonishing degree. That man cannot, or, which is the same thing, has not risen from barbarism to civilization and science by his own efforts and natural talents, appears further from the following facts. The rudiments of all the learning, religion, laws, arts, and sciences, and other improvements that have enlightened Europe, a great part of Asia, and the northern coast of Africa, were so many rays diverging from two points, on the banks of the Euphrates and the Nile. In proportion as nations receded from these two sources of humanity and civilization, in the same proportion were they more and more immersed in ignorance and barbarism. The Greeks had made no progress towards civilization when the Titans first, and afterwards colonies from Egypt and Phenicia, taught them the very elements of science and urbanity*. The aborigines of Italy were in the same state prior to the arrival of the Pelasgi, and the colonies from Arcadia and other parts of Greece. Spain was indebted for the first seeds of improvement to the commercial spirit of the Phenicians. The Gauls, the Britons, and the Germans, derived from the Romans all that in the early periods of their history they knew of science, or the arts of civil life, and so on of other nations in antiquity. The same appears to be the case in modern times. The countries which have been discovered by the restless and inquisitive spirit of Europeans have been generally found in the lowest state of savagism; from which, if they have emerged at all, it has been exactly in proportion to their connection with the inha-

* See *Ti-*
mon.

bitants of Europe. Even western Europe itself, when Savage.
sunk in ignorance, during the reign of monkery, did not recover by the efforts of its own inhabitants. Had not the Greeks, who in the 15th century took refuge in Italy from the cruelty of the Turks, brought with them their ancient books, and taught the Italians to read them, we who are disputing about the origin of the savage state, and the innate powers of the human mind, had at this day been gross and ignorant savages ourselves, incapable of reasoning with accuracy upon any subject. That we have now advanced far before our masters is readily admitted; for the human mind, when put on the right track, and spurred on by emulation and other incitements, is capable of making great improvements: but between improving science, and emerging from savagism, every one perceives there is an immense difference.

Lord Kames observes, that the people who inhabit a grateful soil, where the necessities of life are easily procured, are the first who invent useful and ingenious arts, and the first who figure in the exercises of the mind. But the Egyptians and Chaldeans, who are thought to support this remark, appear from what we have seen to have derived their knowledge from their antediluvian progenitors, and not from any advantages of situation or strength of genius. Besides, the inhabitants of a great part of Africa, of North and South America, and of many of the islands lately discovered, live in regions equally fertile, and equally productive of the necessities of life, with the regions of Chaldee and Egypt; yet these people have been savages from time immemorial, and continue still in the same state. The Athenians, on the other hand, inhabited the most barren and ungrateful region of Greece, while their perfection in the arts and sciences has never been equalled. The Norwegian colony which settled in Iceland about the beginning of the 8th century, inhabited a most bleak and barren soil, and yet the fine arts were eagerly cultivated in that dreary region when the rest of Europe was sunk in ignorance and barbarism. Again, there are many parts of Africa, and of North and South America, where the soil is neither so luxuriant as to beget indolence, nor so barren and ungrateful as to depress the spirits by labour and poverty; where, notwithstanding, the inhabitants still continue in an uncultured state. From all which, and from numerous other instances which our limits permit us not to bring forward, we infer that some external influence is necessary to impel towards civilization savages; and that in the history of the world, or the nature of the thing, we find no instance of any people emerging from barbarism by the progressive efforts of their own genius. On the contrary, as we find in societies highly cultivated and luxurious a strong tendency to degenerate, so in savages we not only find no mark of tendency to improvement, but rather a rooted aversion to it. Among them, indeed, the social appetite never reaches beyond their own horde. It is, therefore, too weak and too confined to dispose them to unite in large communities; and of course, had all mankind been once in the savage state, they never could have arrived at any considerable degree of civilization.

Instead of trusting to any such natural progress, as is contended for, the Providence of Heaven, in pity to the human race, appears at different times, and in dif-

Savage. ferent countries, to have raised up some persons endowed with superior talents, or, in the language of poetry, some heroes, demi-gods, or god-like men, who having themselves acquired some knowledge in nations already civilized, by useful inventions, legislation, religious institutions, and moral arrangements, sowed the first seeds of civilization among the hordes of wandering disunited barbarians. Thus we find the Chinese look up to their Fohee, the Indians to Brahma, the Persians to Zoroaster, the Chaldeans to Oanes, the Egyptians to Thoth, the Phenicians to Melicerta, the Scandinavians to Odin, the Italians to Janus, Saturn, and Picus, and the Peruvians to Manco. In later times, and almost within our own view, we find the barbarous nations of Russia reduced to some order and civilization by the astonishing powers and exertions of Peter the Great. The endeavours of succeeding monarchs, and especially of the present empress, have powerfully contributed to the improvement of this mighty empire. In many parts of it, however, we still find the inhabitants in a state very little superior to savagism; and through the most of it, the lower, and perhaps the middling orders, appear to retain an almost invincible aversion to all further progress*. A fact which, when added to numerous others of a similar nature which occur in the history of the world, seems to prove indisputably that there is no such natural propensity to improvement in the human mind as we are taught by some authors to believe. The origin of savagism, if we allow mankind to have been at first civilized, is easily accounted for by natural means: The origin of civilization, if at any period the whole race were savages, cannot, we think, be accounted for otherwise than by a miracle, or repeated miracles.

* See Russia.

To many persons in the present day, especially, the doctrine we have now attempted to establish, will appear very humiliating; and perhaps it is this alone that has prevented many from giving the subject so patient a hearing as its importance seems to require. It is a fashionable kind of philosophy to attribute to the human mind very pre-eminent powers; which so flatter our pride, as in a great measure, perhaps, to pervert our reason, and blind our judgment. The history of the world, and of the dispensations of God to man, are certainly at variance with the popular doctrine respecting the origin of civilization: for if the human mind be possessed of that innate vigour which that doctrine attributes to it, it will be extremely difficult to account for those numerous facts which seem with irresistible evidence to proclaim the contrary; for that unceasing care with which the Deity appears to have watched over us; and for those various and important revelations He has vouchsafed to us. Let us rejoice and be thankful that we are men, and that we are Christians; but let not a vain philosophy tempt us to imagine that we are angels or gods.

SAVAGE Island, one of the small islands in the South Sea, lying in S. Lat. 19. 1. W. Long. 169. 37. It is about seven leagues in circuit, of a good height, and has deep water close to its shores. Its interior parts are supposed to be barren, as there was no soil to be seen upon the coast; the rocks alone supplying the trees with humidity. The inhabitants are exceedingly warlike and fierce, so that Captain Cook could not have any intercourse with them.

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SAVANNA-LA-MAR, a town of Jamaica, situated in the county of Cornwall in that island.—It is the county-town, where the assize courts are held, the last Tuesdays in March, June, September, and December. It has lately been ornamented by an elegant court-house, and contains about one hundred other houses. It belongs to Westmoreland parish, in which are 89 sugar-estates, 106 other estates, and 18,000 slaves.

SAVANNAH, the capital of the country of Georgia in North America, situated in W. Long. 101. 20. N. Lat. 32. 0.

SAVARY (James), an eminent French writer on the subject of trade, was born at Done, in Anjou, in 1622. Being bred to merchandize, he continued in trade until 1658; when he left off the practice, to cultivate the theory. He had married in 1650; and in 1660, when the king declared a purpose of assigning privileges and pensions to such of his subjects as had twelve children alive, Mr Savary was not too rich to put in his claim to the royal bounty. He was afterwards admitted of the council for the reformation of commerce; and the orders which passed in 1670 were drawn up by his instructions and advice. He wrote *Le Parfait Negociant*, 4to; and, *Avis et conseils sur les plus importantes matieres du Commerce*, in 4to. He died in 1690; and out of 17 children whom he had by one wife, left 11. Two of his sons, James and Philemon Lewis, laboured jointly on a great work, *Dictionnaire Universelle du Commerce*, 2 vols folio. This work was begun by James, who was inspector-general of the manufactures at the customhouse, Paris; who called in the assistance of his brother Philemon Lewis, although a canon of the royal church of St Maur; and by his death left him to finish it. This work appeared in 1723, and Philemon afterwards added a third supplemental volume to the former. Postlethwayte's English Dictionary of Trade and Commerce is a translation, with considerable improvements, from Savary.

SAVARY, an eminent French traveller and writer, was born at Vitre, in Brittany, about the year 1748. He studied with applause at Rennes, and in 1776 travelled into Egypt, where he remained almost three years. During this period he was wholly engaged in the study of the Arabian language, in searching out ancient monuments, and in examining the national manners. After making himself acquainted with the knowledge and philosophy of Egypt, he visited the islands in the Archipelago, where he spent 18 months. On his return to France, in 1780, he published, 1. A Translation of the Koran, with a short Life of Mahomet, in 1783, 2 vols 8vo. 2. The Morality of the Koran, or a collection of the most excellent maxims in the Koran; a work extracted from his translation, which is esteemed both elegant and faithful. 3. Letters on Egypt, in 3 vols 8vo, in 1785. In these the author makes his observations with accuracy, paints with vivacity, and renders interesting every thing he relates. His descriptions are in general faithful, but are perhaps in some instances too much ornamented. He has been justly censured for painting modern Egypt and its inhabitants in too high colours. These letters, however, were bought up by the curious public, and read with pleasure and advantage. Encouraged by this flattering reception, he prepared his letters upon Greece. He died

Savary,
Saucisse.

soon after at Paris of a malady contracted from too intense application. A sensible obstruction in the right lobe of the liver had made a decisive progress, which the return of summer, some simple medicines, a strict regimen, and travelling, seemed to remove.

On his return into the country adjacent to Paris, his health however was still doubtful; for it is well known that when the organization of one of the viscera has been much deranged, deep traces of it will ever remain. His active mind, however, made him regardless of his health, and he conceived it his duty to profit by those appearances of recovery which he experienced at the close of the summer and the beginning of autumn, to put into order his travels into the islands of the Archipelago, intended as a continuation of his letters on Egypt. His warmth of temper was exasperated by some lively criticisms which had been made on his former productions, and he gave himself up to study with a degree of activity of which the consequences were sufficiently obvious. An obstruction in the liver again took place, and made a new progress; his digestion became extremely languid; sleep quite forsook him, both by night and by day; a dry and troublesome cough came on; his face appeared bloated, and his legs more and more inflamed. The use of barley water and cream of tartar still however promoted, in some degree, the urinary secretions, and afforded some little glimmering of hope. In this situation he returned to Paris in the beginning of the year 1788, to attend to the publication of his new work concerning the islands of the Archipelago, particularly the isle of Candia. He had then all the symptoms of a dangerous dropsy, which became still more alarming from the very exhausted state of the viscera. The right lobe of the liver was extremely hard and sensible. The patient had shiverings without any regular returns, and his strength was undermined by a hectic fever. At the same time still more uneasy symptoms took place, those of a dropsy in the chest; but the circumstances which destroyed all hope, and announced his approaching dissolution, were a severe pain in the left side, with a very troublesome cough, and a copious and bloody expectoration (*in hepaticis*, says Hippocrates, *sputum cruentum mortiferum*); his respiration became more and more difficult; his strength was exhausted, and his death took place on the 14th of February 1788, attended with every indication of the most copious overflowing in the chest, and of an abscess in the liver.— Thus was destroyed, in the vigour of his age, an author whose character and talents rendered him worthy of the happiest lot.

Mr Savary's genius was lively and well cultivated; his heart warm and benevolent; his imagination vigorous; his memory retentive. He was cheerful and open; and had so great a talent for telling a story, that his company was not less agreeable than instructive. He did not mingle much with the world, but was satisfied with performing well the duties of a son, of a brother, and of a friend.

SAUCISSE, or SAUCISSON, in mining, is a long pipe or bag made of cloth well pitched, or sometimes of leather, of about an inch and an half diameter, filled with powder, going from the chamber of the mine to the entrance of the gallery. It is generally placed in a wooden pipe called an *auget*, to prevent its grow-

ing damp. It serves to give fire to mines, caissons, bomb-chests, &c.

SAUCISSON, is likewise a kind of fascine, longer than the common ones; they serve to raise batteries and to repair breaches. They are also used in making epaulements, in stopping passages, and in making traverses over a wet ditch, &c.

SAVE, a river of Germany, which has its source in Upper Carniola, on the frontiers of Carinthia.— It runs through Carniola from west to east, afterwards separates Slavonia from Croatia, Bosnia, and part of Servia, and then falls into the Danube at Belgrade.

SAVER-KROUT. See CROUTE.

SAVERNAKE-FOREST is situated near Marlborough in Wiltshire, and is 12 miles in circumference, well stocked with deer, and delightful from the many vistas cut through the woods and coppices with which it abounds. Eight of these vistas meet, like the rays of a star, in a point near the middle of the forest, where an octagon tower is erected to correspond with the vistas; through one of which is a view of Tottenham Park, Lord Ailesbury's seat, a stately edifice erected after the model, and under the direction, of our modern Vitruvius, the Earl of Burlington, who to the strength and convenience of the English architecture has added the elegance of the Italian.

SAVILE (Sir George), afterwards marquis of Halifax, and one of the greatest statesmen of his time, was born about the year 1630; and some time after his return from his travels was created a peer, in consideration of his own and his father's merits. He was a strenuous opposer of the bill of exclusion; but proposed such limitations of the duke of York's authority, as should disable him from doing any harm either in church or state, as the taking out of his hands all power in ecclesiastical matters, the disposal of the public money, and the power of making peace and war; and lodging these in the two houses of parliament. After that bill was rejected in the house of lords, he pressed them, though without success, to proceed to the limitation of the duke's power; and began with moving, that during the king's life he might be obliged to live five hundred miles out of England. In August 1682 he was created a marquis, and soon after made privy-seal. Upon King James's accession, he was made president of the council; but on his refusal to consent to the repeal of the test, he was dismissed from all public employments. In that assembly of the lords which met after king James's withdrawing himself the first time from Whitehall, the marquis was chosen their president; and upon the king's return from Feverham, he was sent, together with the earl of Shrewsbury and lord Delamere, from the Prince of Orange, to order his majesty to quit the palace at Whitehall. In the convention of parliament he was chosen speaker of the house of lords, and strenuously supported the motion for the vacancy of the throne, and the conjunctive sovereignty of the prince and princess; upon whose accession he was again made privy-seal. Yet, in 1689, he quitted the court, and became a zealous opposer of the measures of government till his death, which happened in April 1695. The rev. Mr Grainger observes, that "he was a person of unsettled principles, and of a lively imagination, which sometimes got the better of his judgment. He would never lose his

Saucisson
||
Savile.

Savin his jest, though it spoiled his argument, or brought his sincerity or even his religion in question. He was deservedly celebrated for his parliamentary talents; and in the famous contest relating to the bill of exclusion was thought to be a match for his uncle Shaftsbury. The pieces he has left us show him to have been an ingenious, if not a masterly writer; and his *Advice to a Daughter* contains more good sense in fewer words than is, perhaps, to be found in any of his contemporary authors." His lordship also wrote, *The Anatomy of an Equivalent*; a *Letter to a Dissenter*; a *Rough Draught of a New Model at Sea*; and *Maxims of State*; all which were printed together in one volume 8vo.— Since these were also published under his name the *Character of king Charles II.* 8vo; the *Character of Bishop Burnet*, and *Historical Observations upon the reigns of Edward I. II. III. and Richard II.* with *Remarks upon their faithful Counsellors and false Favourites.*

SAVIN, in botany. See **JUNIPERUS**.

SAVIOUR, an appellation peculiarly given to Jesus Christ, as being the Messiah and Saviour of the world. See **JESUS**.

Order of St SAVIOUR, a religious order of the Romish Church, founded by St Bridget, about the year 1345, and so called from its being pretended that our Saviour himself declared its constitution and rules to the foundress. According to the constitutions, this is principally founded for religious women who pay a particular honour to the holy virgin; but there are some monks of the order, to administer the sacrament and spiritual assistance to the nuns.

SAUL the son of Kish, of the tribe of Benjamin, was the first king of the Israelites. On account of his disobedient conduct, the kingdom was taken from his family, and given to David. See the *First Book of Samuel*.

SAUL, otherwise called Paul. See **PAUL**.

SAUMUR, a considerable town of France, in Anjou, and capital of the Saumarois, with an ancient castle. The town is small, but pleasantly situated on the Loire, across which is a long bridge, continued through a number of islands. Saumur was anciently a most important pass over the river, and of consequence was frequently and fiercely disputed by either party, during the civil wars of France in the sixteenth century. The fortifications are of great strength, and Henry the Fourth, on the reconciliation which took place between him and Henry the Third, near Tours, in 1589, demanded that Saumur should be delivered to him, as one of the cities of safety. The castle overlooks the town and river. It is built on a lofty eminence, and has a venerable and magnificent appearance, and was lately used as a prison of state, where persons of rank were frequently confined. The Kings of Sicily, and Dukes of Anjou of the house of Valois, who descended from John king of France, often resided in the castle of Saumur, as it constituted a part of their Angevin dominions. E. Long. 0. 2. N. Lat. 47. 15.

SAUNDERS, a kind of wood brought from the East Indies, of which there are three kinds; white, yellow, and red. See **PTEROCARPUS** and **SANTALUM**.

SAUNDERSON (Dr Robert), an eminent casuist, was born at Rotherham in Yorkshire on the 19th September 1587, and was descended of an ancient fa-

mily. He attended the grammar-school at Rotherham, Saunderson where he made such wonderful proficiency in the languages, that at 13 it was judged proper to send him to Lincoln college, Oxford. In 1608 he was appointed logic reader in the same college. He took orders in 1611, and was promoted successively to several benefices. Archbishop Laud recommended him to king Charles I. as a profound casuist; and that monarch, who seems to have been a great admirer of casuistical learning, appointed him one of his chaplains in 1631. Charles proposed several cases of conscience to him, and received so great satisfaction from his answers, that at the end of his month's attendance he told him, that he would wait with impatience during the intervening 11 months, as he was resolved to be more intimately acquainted with him, when it would again be his turn to officiate. The king regularly attended his sermons, and was wont to say, that "he carried his ears to hear other preachers, but his conscience to hear Mr Saunderson."

In 1642 Charles created him regius professor of divinity at Oxford, with the canonry of Christ church annexed: but the civil wars prevented him till 1646 from entering on the office; and in 1648 he was ejected by the visitors which the parliament had commissioned. He must have stood high in the public opinion; for in the same year in which he was appointed professor of divinity, both houses of parliament recommended him to the king as one of their trustees for settling the affairs of the church. The king, too, reposed great confidence in his judgment, and frequently consulted him about the state of his affairs. When the parliament proposed the abolition of the episcopal form of church-government as incompatible with monarchy, Charles desired him to take the subject under his consideration and deliver his opinion. He accordingly wrote a treatise entitled, *Episcopacy as established by law in England not prejudicial to regal power*. At taking leave, the king advised him to publish *Cases of Conscience*: he replied, that "he was now grown old and unfit to write cases of conscience." The king said, "it was the simplest thing he ever had heard from him; for no young man was fit to be a judge, or write cases of conscience." Walton, who wrote the life of Dr Saunderson, informs us, that in one of these conferences the king told him (Dr Saunderson), or one of the rest who was then in company, that "the remembrance of two errors did much affect him; which were his assent to the earl of Strafford's death, and the abolishing of episcopacy in Scotland; and that if God ever restored him to the peaceable possession of his crown, he would prove his repentance by a public confession and a voluntary penance, by walking barefoot from the Tower of London, or Whitehall, to St Paul's church, and would desire the people to intercede with God for his pardon."

Dr Saunderson was taken prisoner by the parliament's troops and conveyed to Lincoln, in order to procure in exchange a Puritan divine named *Clark*, whom the king's army had taken. The exchange was agreed to, on condition that Dr Saunderson's living should be restored, and his person and property remain unmolested. The first of these demands was readily complied with: and a stipulation was made, that the second should be observed; but it was impossible to restrain the licentiousness of the soldiers. They entered his

Saunderson. his church in the time of divine service, interrupted him when reading prayers, and even had the audacity to take the common prayer book from him, and to tear it to pieces.

The Honourable Mr Boyle, having read a work of Dr Saunderson's entitled *De juramenti obligatione*, was so much pleased, that he inquired at Bishop Barlow, whether he thought it was possible to prevail on the author to write Cases of Conscience, if an honorary pension was assigned him to enable him to purchase books, and pay an amanuensis. Saunderson told Barlow, "that if any future tract of his could be of any use to mankind, he would cheerfully set about it without a pension." Boyle, however, sent him a present of 50l, sensible no doubt, that, like the other royalists, his finances could not be great. Upon this Saunderson published his book *De Conscientia*.

When Charles II. was reinstated in the throne, he recovered his professorship and canonry, and soon after was promoted to the bishopric of Lincoln. During the two years and a half in which he possessed this new office, he spent a considerable sum in augmenting poor vicarages, in repairing the palace at Bugden, &c. He died January 29. 1662-3, in his 76th year.

He was a man of great acuteness and solid judgment. "That steady and well-weighed man Dr Saunderson (says Dr Hammond) conceives all things deliberately, dwells upon them discreetly, discerns things that differ exactly, passeth his judgment rationally, and expresses it aptly, clearly, and honestly." Being asked, what books he had read most? he replied, that "he did not read many books, but those which he did read were well chosen and frequently perused." These, he said, were chiefly three, Aristotle's *Rhetoric*, Aquinas's *Secunda Secunda*, and Tully's Works; especially his Offices, which he had not read over less than 20 times, and could even, in his old age, recite without book." He added, that "the learned civilian Dr Zouch had written *Elementa juris prudentiae*, which he thought he could also say without book, and that no wise man could read it too often." He was not only conversant with the fathers and schoolmen, with casuistical and controversial divinity; but he was well acquainted with all the histories of the English nation, was a great antiquary, had searched minutely into records, and was well skilled in heraldry and genealogy.

It will now be proper to give a short account of his works. 1. In 1615 he published *Logica Artis Compendium*, which was the system of lectures he had delivered in the University when he was logic-reader. 2. Sermons, amounting in number to 36, printed in 1681, folio, with the author's life by Walton. 3. Nine Cases of Conscience resolved; first collected in one volume, in 1678, 8vo. 4. *De juramenti obligatione*. This book was translated into English by Charles I. while a prisoner in the Isle of Wight, and printed at London in 1665, 8vo. 5. *De Obligatione conscientiae*. 6. Censure of Mr Antony Ascham his book of the confusions and revolutions of government. 7. *Pax Ecclesiae* concerning Predestination, or the five points. 8. Episcopacy, as established by law in England, not prejudicial to the regal power, in 1661. Besides these, he wrote two Discourses in defence of Usher's writings.

SAUNDERSON (Dr Nicolas), was born at Thurlstone in Yorkshire in 1682, and may be considered as a

prodigy for his application and success in mathematical literature in circumstances apparently the most unfavourable. He lost his sight by the small-pox before he was a year old. But this disaster did not prevent him from searching after that knowledge for which nature had given him so ardent a desire. He was initiated into the Greek and Roman authors at a free-school at Penistone. After spending some years in the study of the languages, his father (who had a place in the excise) began to teach him the common rules of arithmetic. He soon surpassed his father; and could make long and difficult calculations, without having any sensible marks to assist his memory. At 18 he was taught the principles of algebra and geometry by Richard West of Underbank, Esq; who, though a gentleman of fortune, yet, being strongly attached to mathematical learning, readily undertook the education of so uncommon a genius. Saunderson was also assisted in his mathematical studies by Dr Nettleton. These two gentlemen read books to him and explained them. He was next sent to a private academy at Attercliff near Sheffield, where logic and metaphysics were chiefly taught. But these sciences not suiting his turn of mind, he soon left the academy. He lived for some time in the country without any instructor; but such was the vigour of his own mind, that few instructions were necessary: he only required books and a reader.

His father, besides the place he had in the excise, possessed also a small estate; but having a numerous family to support, he was unable to give him a liberal education at one of the universities. Some of his friends, who had remarked his perspicuous and interesting manner of communicating his ideas, proposed that he should attend the university of Cambridge as a teacher of mathematics. This proposal was immediately put in execution; and he was accordingly conducted to Cambridge in his 25th year by Mr Joshua Dunn, a fellow-commoner of Christ's college. Though he was not received as a member of the college, he was treated with great attention and respect. He was allowed a chamber, and had free access to the library. Mr Whiston was at that time professor of mathematics; and as he read lectures in the way that Saunderson intended, it was naturally to be supposed he would view his project as an invasion of his office. But, instead of meditating any opposition, the plan was no sooner mentioned to him than he gave his consent. Saunderson's reputation was soon spread through the university. When his lectures were announced, a general curiosity was excited to hear such intricate mathematical subjects explained by a man who had been blind from his infancy. The subject of his lectures was the *Principia Mathematica*, the Optics, and *Arithmetica Universalis* of Sir Isaac Newton. He was accordingly attended by a very numerous audience. It will appear at first incredible to many that a blind man should be capable of explaining optics, which requires an accurate knowledge of the nature of light and colours; but we must recollect, that the theory of vision is taught entirely by lines, and is subject to the rules of geometry.

While thus employed in explaining the principles of the Newtonian philosophy, he became known to its illustrious author. He was also intimately acquainted with Halley, Cotes, De Moivre, and other eminent mathematicians. When Whiston was removed from his professor-

Saunderson. professorship, Saunderson was universally allowed to be the man best qualified for the succession. But to enjoy this office, it was necessary, as the statutes direct, that he should be promoted to a degree. To obtain this privilege the heads of the university applied to their chancellor the duke of Somerset, who procured the royal mandate to confer upon him the degree of master of arts. He was then elected Lucasian professor of mathematics in November 1711. His inauguration speech was composed in classical Latin, and in the style of Cicero, with whose works he had been much conversant. He now devoted his whole time to his lectures, and the instruction of his pupils. When George II. in 1728, visited the University of Cambridge, he expressed a desire to see Professor Saunderson. In compliance with this desire, he waited upon his majesty in the senate-house, and was there, by the king's command, created doctor of laws. He was admitted a member of the Royal Society in 1736.

Saunderson was naturally of a vigorous constitution; but having confined himself to a sedentary life, he at length became scorbutic. For several years he felt a numbness in his limbs, which, in the spring of 1739, brought on a mortification in his foot; and, unfortunately, his blood was so vitiated by the scurvy, that assistance from medicine was not to be expected. When he was informed that his death was near, he remained for a little space calm and silent; but he soon recovered his former vivacity, and conversed with his usual ease. He died on the 19th of April 1739, in the 57th year of his age, and was buried at his own request in the chancel at Boxworth.

He married the daughter of the reverend Mr Dickens, rector of Boxworth, in Cambridgeshire, and by her had a son and daughter.

Dr Saunderson was rather to be admired as a man of wonderful genius and assiduity, than to be loved for amiable qualities. He spoke his sentiments freely of characters, and praised or condemned his friends as well as his enemies without reserve. This has been ascribed by some to a love of defamation; but perhaps with more propriety it has been attributed by others to an inflexible love of truth, which urged him upon all occasions to speak the sentiments of his mind without disguise, and without considering whether this conduct would please or give offence. His sentiments were supposed unfavourable to revealed religion. It is said, that he alleged he could not know God, because he was blind, and could not see his works; and that, upon this, Dr Holmes replied, "Lay your hand upon yourself, and the organization which you will feel in your own body will dissipate so gross an error." On the other hand, we are informed, that he had desired the sacrament to be given him on the evening before his death. He was, however, seized with a delirium, which rendered this impossible.

He wrote a system of algebra, which was published, in 2 volumes 4to, at London, after his death, in the year 1740, at the expence of the University of Cambridge.

Dr Saunderson invented for his own use a Palpable Arithmetic; that is, a method of performing operations in arithmetic solely by the sense of touch. It consisted of a table raised upon a small frame, so that he could apply his hands with equal ease above and below. On this table were drawn a great number of parallel lines

which were crossed by others at right angles; the edges of the table were divided by notches half an inch distant from one another, and between each notch there were five parallels; so that every square inch was divided into a hundred little squares. At each angle of the squares where the parallels intersected one another, a hole was made quite through the table. In each hole he placed two pins, a big and a small one. It was by the various arrangements of the pins that Saunderson performed his operations. A description of this method of making calculations by his table is given under the article **BLIND**, n° 38, though it is there by mistake said that it was not of his own invention.

His sense of touch was so perfect, that he could discover with the greatest exactness the slightest inequality of surface, and could distinguish in the most finished works the smallest oversight in the polish. In the cabinet of medals at Cambridge he could single out the Roman medals with the utmost correctness; he could also perceive the slightest variation in the atmosphere. One day, while some gentlemen were making observations on the sun, he took notice of every little cloud that passed over the sun which could interrupt their labours. When any object passed before his face, even though at some distance, he discovered it, and could guess its size with considerable accuracy. When he walked, he knew when he passed by a tree, a wall, or a house. He made these distinctions from the different ways his face was affected by the motion of the air.

His musical ear was remarkably acute; he could distinguish accurately to the fifth of a note. In his youth he had been a performer on the flute; and he had made such proficiency, that if he had cultivated his talents in this way, he would probably have been as eminent in music as he was in mathematics. He recognized not only his friends, but even those with whom he was slightly acquainted, by the tone of their voice; and he could judge with wonderful exactness of the size of any apartment into which he was conducted.

SAVONA, a large, handsome, populous, and strong town of Italy, in the territory of Genoa, with two castles, and a bishop's see. It contains several handsome churches and well-built structures. It was taken by the king of Sardinia in 1746, at which time it had a capacious harbour; but the people of Genoa, being afraid that it would hurt their own trade, choked it up. It is seated on the Mediterranean sea, in a well-cultivated country, abounding in silk and all kinds of good fruit. E. Long. 8. 14. N. Lat. 44. 21.

SAVONAROLA (Jerome), a famous Italian monk, was born at Ferrara in 1452, and descended of a noble family. At the age of 22 he assumed the habit of a Dominican friar, without the knowledge of his parents, and distinguished himself in that order by his piety and ability as a preacher. Florence was the theatre where he chose to appear; there he preached, confessed, and wrote. He had address enough to place himself at the head of the faction which opposed the family of the Medici. He explained the Apocalypse, and there found a prophecy which foretold the destruction of his opponents. He predicted a renovation of the church, and declaimed with much severity against the clergy and the court of Rome. Alexander VI. excommunicated him, and prohibited him from preaching. He derided the anathemas of the Pope: yet he forbore preaching

Savonarola, for some time, and then resumed his employment with more applause than before. The Pope and the Medici family then thought of attacking him with his own weapons. Savonarola having posted up a thesis as a subject of disputation, a Franciscan, by their instigation, offered to prove it heretical. The Franciscan was seconded by his brother friars, and Savonarola by his; and thus the two orders were at open war with each other. To settle the dispute, and to convince their antagonists of the superior sanctity of Savonarola, one of the Dominicans offered to walk through a fire; and in order to prove his wickedness, a Franciscan agreed to the same experiment. The multitude, eager to witness so extraordinary a spectacle, urged both parties to come to a decision; and the magistrates were constrained to give their consent. Accordingly, Saturday the 7th of April 1498 was fixed for the trial. On that day the champions appeared; but when they saw one another in cold blood, and beheld the wood in flames, they were seized with fear, and were very anxious to escape by any subterfuge the imminent danger into which they had rashly thrown themselves. The Dominican pretended he could not enter the flames without the host in his hand. This the magistrates obstinately refused to allow; and the Dominican's fortitude was not put to the test. The Franciscans incited the multitude against their opponents, who accordingly assaulted their monastery, broke open the gates which were shut against them, and entered by force. Upon this, the magistrates thought it necessary to bring Savonarola to trial as an impostor. He was put to the torture, and examined; and the answers which he gave fully evinced that he was both a cheat and a fanatic. He boasted of having frequent conversations with God, and found his brother friars credulous enough to believe him. One of the Dominicans, who had shared in his sufferings, affirmed, that he saw the Holy Ghost in the shape of a dove, with feathers of gold and silver, twice in one day alight on the shoulder of Savonarola and peck his ear; he pretended also that he had violent combats with demons. John Francis Picus earl of Mirandula, who wrote his life, assures us, that the devils which infested the convent of the Dominicans trembled at the sight of friar Jerome, and that out of vexation they always suppressed some letters of his name in pronouncing it. He expelled them from all the cells of the monastery. When he went round the convent sprinkling holy water to defend the friars from the insults of the demons, it is said the evil spirits spread thick clouds before him to prevent his passage.—At length, the pope Alexander VI. sent the chief of the Dominicans, with bishop Romolino, to degrade him from holy orders, and to deliver him up to the secular judges with his two fanatical associates. They were condemned to be hanged and burned on the 23d May 1498. Savonarola submitted to the execution of the sentence with great firmness and devotion, and without uttering a word respecting his innocence or his guilt. He was 46 years of age. Immediately after his death, his Confession was published in his name. It contained many extravagancies, but nothing to deserve so severe and infamous a punishment. His adherents did not fail to attribute to him the power of working miracles; and so strong a veneration had they for their chief, that they preserved with pious care any parts of his body which they could snatch from the flames. The earl of Mirandula,

the author of his life, has described him as an eminent saint. He gravely informs us, that his heart was found in a river; and that he had a piece of it in his possession, which had been very useful in curing diseases, and ejecting demons. He remarks, that many of his persecutors came to a miserable end. Savonarola has also been defended by Father Quetif, Bzovius, Baron, and other religious Dominicans.

He wrote a prodigious number of books in favour of religion. He has left, 1. Sermons in Italian; 2. A Treatise entitled, *Triumphus crucis*; 3. *Eruditorum Confessorum*, and several others. His works have been published at Leyden in 6 volumes 12mo.

SAVORY, in botany. See SATUREIA.

SAVOUR. See TASTE.

SAVOY, a duchy lying between France and Italy, and which takes its name from the Latin Sabaadia, altered afterwards to Saboia, and Sobojia.

This country was anciently inhabited by the Celtes, whose descendants therein were subdivided into the Allobroges, Nantuates, Veragri, Seduni, Salassi, Centrones, Garocelli, and some others of inferior note.—Of all these the Allobroges were the most considerable. The reduction of these tribes, in which Julius Cæsar had made a great progress, was completed under Augustus. Afterwards this country shared the fate of the rest of the western empire, and was over-run by the northern barbarians. The Burgundians held it a considerable time; but when or how it first became a distinct earldom under the present family, is what historians are not agreed about: thus much, however, is certain, that Amadæus I. who lived in the 12th century, was count of it. In 146, Amadæus VIII. was created by the emperor Sigismund duke of Savoy; and Victor Amadæus first took the title of king of Sicily, and afterwards of Sardinia. See SARDINIA. Savoy was lately conquered by the French, and added to the republic as the eightieth department. As this arrangement, though decreed by the convention to last for ever, may probably be of short duration, we shall write of the duchy as of an independent state. Savoy, then, is bounded to the south by France and Piedmont; to the north by the lake of Geneva, which separates it from Switzerland; to the west, by France; and to the east, by Piedmont, the Milanese, and Switzerland; its greatest length being about eighty-eight miles, and breadth about seventy six.

As it lies among the Alps, it is full of lofty mountains, which in general are very barren: many of the highest of them are perpetually covered with ice and snow. The summit of those called *Montagnes Maudites*, "the cursed mountains," are said to be more than two English miles in perpendicular height above the level of the lake of Geneva, and the level itself is much higher than the Mediterranean. In some few of the valleys there is corn-land and pasture, and a good breed of cattle and mules; and along the lake of Geneva, and in two or three other places, a tolerable wine is produced. Mount Senis or Cenis, between Savoy and Piedmont, over which the highway from Geneva to Turin lies, is as high, if not higher, than the *Montagnes Maudites*; but of all the mountains of the Alps, the highest is mount Rochmelon, in Piedmont, between Fertièrre and Novalesè. The roads over these mountains are very tedious, disagreeable, and dangerous, especially as huge masses of snow, called by the Italians *avalanches*,

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avalanches, and fragments of rocks, frequently roll down into them from the impending precipices. The way of travelling is either in sledges, chairs, or on the backs of mules: in some places the path on the brink of the precipices is so narrow, that there is but just room for a single person to pass. It begins to snow on these mountains commonly about the beginning of October. In summer, in the months of July, August, and September, many of them yield very fine grass, with a great variety of flowers and herbs; and others box-wood, walnuts, chestnuts, and pines. The height and different combinations of these mountains, their towering summits rising above one another, and covered with snow, the many cataracts or falls of water, the noise and rapidity of the river Arc, the froth and green tincture of its water, the echoes of its numerous streams tumbling from cliff to cliff, form altogether a very romantic scene. These mountainous tracts, notwithstanding their height, are not altogether free from thunder in summer, and are also much exposed to thick clouds, which sometimes settle unexpectedly on them, and continue several days. There are some wolves among the thickets; and they abound with hares, rupicapras or chamois, and marmottes. In the lower parts of Savoy, there are also bears, wild boars, deer, and rabbits; and among the desolate mountains are found great quantities of rock-crystal. In the glaciers or ice-valleys, between the high mountains, the air is extremely cold, even in the months of July and August. The surface of these ice-valleys looks like a sea or lake, which, after being agitated by fierce and contrary winds, has been frozen all at once, interspersed with hideous cracks and chasms. The noise of these cracks, when first made by the heat of the noon-day sun, and reverberated by the surrounding rocks and mountains, is astonishing. The height of the impending mountains is such, that the sun's rays seldom reach the ice-valleys, except a few hours in the middle of summer. The avalanches or snow-balls, which the least concussion of the air will occasion, tumble down the mountains with amazing rapidity, continually increasing, and carrying all before them. People have been taken out alive, after being buried several days under them. The mountainous nature of this duchy renders the plough a useless instrument of agriculture. The peasants break up the hungry soil with the pickaxe and spade, and to improve it carry up mould and dung in baskets. For the purpose of preserving it from drought in the spring and summer, they cut small reservoirs above it, the water of which may be let out at will; and to prevent the earth from giving way, break the declivity of the mountains by building walls on the side for its support, which frequently assume the appearance of ancient fortification, and are a very pleasing deception to travellers. The Savoyards carry their better sort of cheese into Piedmont, as the flavour is much esteemed there; but they gain more by their skins of bears, chamois, and bouquetins (a species of the wild goat), or by the sale of grouse and pheasants, which they carry in great numbers to Turin.

The chief rivers are the Rhone, which, on the side of Geneva, separates Savoy from France; the Arve, which has some particles of gold in its sands; the Isere, the Seran, the Siers, and the Arc. There are also a great many lakes in this country, which yield

plenty of fish, but none of them are very large, together with medicinal and reciprocating springs and hot baths.

The language of the common people is a corrupt French; but the better sort, and those that live in the great cities, speak as good French as they do in Paris itself.

In their temper, however, and disposition, the Savoyards resemble the Germans more than the French, retaining still much of the old German honesty and simplicity of manners, which no doubt is partly owing to the poverty and barrenness of the country. To this also, joined to their longevity and the fruitfulness of their women, which are the effects of their cheerful disposition, healthy air, activity, temperance, and sobriety, it is owing that great numbers of them are obliged to go abroad in quest of a livelihood, which they earn, those at least who have no trades, by showing marmottes, cleaning shoes, sweeping chimneys, and the like. It is said, that there are generally about 18,000 of them, young and old, about Paris. In summer they lie in the streets, and in winter, forty, fifty, or sixty of them lodge together in a room: they are so honest that they may be trusted to any amount. The children are often carried abroad in baskets before they are able to walk. In many villages of Savoy there is hardly a man to be seen throughout the year, excepting a month or two. Those that have families generally set out and return about the same season, when their wives commonly lie in, and they never fail to bring home some part of their small earnings. Some of them are such consummate masters of economy, that they set up shops and make fortunes, and others return home with a competency for the rest of their days. An old man is often dispatched with letters, little presents, and some money, from the younger sort, to their parents and relations, and brings back with him fresh colonies, letters, messages, and news. The cultivation of their grounds, and the reaping and gathering in of the harvest and vintage, are generally left to the women and children; but all this is to be understood of the mountainous parts of Savoy. Great numbers of the mountaineers of both sexes are said to be lame and deformed; and they are much subject to a kind of wens, which grow about their throats, and very much disfigure them, especially the women; but that is the only inconvenience they feel from them.

The nobility of Savoy, and the other dominions of the king of Sardinia, labour under great hardships and restrictions, unheard of in other countries, which we have not room here to particularize. A minute account of them will be found in Mr Keysser's Travels. In short, the king has left neither liberty, power, nor much property, to any but himself and the clergy, whose overgrown wealth he has also greatly curtailed.

No other religion is professed or tolerated in Savoy but that of the church of Rome. The decrees, however, of the council of Trent are not admitted; nor are the churches asylums for malefactors.

This duchy is divided into those of Chablais, Genevois, and Savoy Proper, the counties of Tarantaise and Maurienne, and the barony of Faucigny.

SAURIN (James), a celebrated preacher, was born at Nîmes in 1677, and was the son of a Protestant lawyer of considerable eminence. He applied to his studies with

Savoy,
Saurin.

Saurin. with great success; but at length being captivated with a military life, he relinquished them for the profession of arms. In 1694 he made a campaign as a cadet in lord Galloway's company, and soon afterwards obtained a pair of colours in the regiment of colonel Renault which served in Piedmont. But the duke of Savoy having made peace with France, he returned to Geneva, and resumed the study of philosophy and theology under Turretin and other professors. In 1700 he visited Holland, then came to England, where he remained for several years, and married. In 1705 he returned to the Hague, where he fixed his residence, and preached with the most unbounded applause. To an exterior appearance highly prepossessing, he added a strong harmonious voice. The sublime prayer which he recited before his sermon was uttered in a manner highly affecting. Nor was the attention excited by the prayer dissipated by the sermon: all who heard it were charmed; and those who came with an intention to criticise, were carried along with the preacher and forgot their design. Saurin had, however, one fault in his delivery; he did not manage his voice with sufficient skill. He exhausted himself so much in his prayer and the beginning of his sermon, that his voice grew feeble towards the end of the service. His sermons, especially those published during his life, are distinguished for justness of thought, force of reasoning, and an eloquent unaffected style.

The first time that the celebrated Abaddie heard him preach, he exclaimed, "Is it an angel or a man who speaks?" Saurin died on the 30th of December 1730, aged 53 years.

He wrote, 1. Sermons, which were published in 12 vols 8vo and 12mo; some of which display great genius and eloquence, and others are composed with negligence. One may observe in them the imprecations and the aversion which the Calvinists of that age were wont to utter against the Roman Catholics. Saurin was, notwithstanding, a lover of toleration: and his sentiments on this subject gave great offence to some of his fanatical brethren, who attempted to obscure his merit, and embitter his life. They found fault with him because he did not call the pope *Antichrist*, and the Romish church *the whore of Babylon*. But these prophetic metaphors, however applicable they may be, were certainly not intended by the benevolent religion of Jesus to be bandied about as terms of reproach; which would teach those to rail who use them, and irritate, without convincing, those to whom they were applied.

Saurin, therefore, while he perhaps interpreted these metaphors in the same way with his opposers, discovered more of the moderation of the Christian spirit. Five volumes of his sermons were published in his life, the rest have been added since his decease.

2. Discourses Historical, Critical, and Moral, on the most memorable Events of the Old and New Testament. This is his greatest and most valuable work. It was printed first in two volumes folio. As it was left unfinished, Beaufobre and Roques undertook a continuation of it, and increased it to four volumes. It is full of learning: it is indeed a collection of the opinions of the best authors, both Christian and Heathen; of the philosophers, historians, and critics, in every subject which the author examines. 3. The State of Christianity in France, 1725, 8vo. In this book he discusses

many important points of controversy, and calls in question the truth of the miracle said to be performed on La Fosse at Paris. 4. An Abridgment of Christian Theology and Morality, in the form of a Catechism, 1722, 8vo. He afterwards published an abridgment of this work.

A Dissertation which he published on the Expediency of sometimes disguising the Truth, raised a multitude of enemies against him. In this discourse his plan was, to state the arguments of those who affirm that, in certain cases, it is lawful to disguise truth, and the answers of those who maintain the contrary. He does not determine the question, but seems, however, to incline to the first opinion. He was immediately attacked by several adversaries, and a long controversy ensued; but his doctrines and opinions were at length publicly approved of by the synods of Campen and of the Hague.

The subject of this controversy has long been agitated, and men of equally good principles have supported opposite sides. It would certainly be a dangerous maxim that falsehood can ever be lawful. There may, indeed, be particular cases, when the motives to it are of such a nature as to diminish its criminality in a high degree; but to lessen its guilt is a very different thing from justifying it by the laws of morality.

SAURIN (Joseph), a geometrician of the academy of Sciences at Paris, was born at Courtoufon in the principality of Orange, in 1659. His father, who was a minister at Grenoble, was his first preceptor. He made rapid progress in his studies, and was admitted minister of Eure in Dauphiny when very young: but having made use of some violent expressions in one of his sermons, he was obliged to quit France in 1683. He retired to Geneva, and thence to Berne, where he obtained a considerable living. He was scarcely settled in his new habitation, when some theologians raised a persecution against him. Saurin, hating controversy, and disgusted with Switzerland, where his talents were entirely concealed, repaired to Holland. He returned soon after to France, and surrendered himself into the hands of Bossuet bishop of Meaux, who obliged him to make a recantation of his errors. This event took place in 1690. His enemies, however, suspected his sincerity in the abjuration which he had made. It was a general opinion, that the desire of cultivating science in the capital of France had a greater effect in producing this change than religion. Saurin, however, speaks of the reformers with great asperity, and condemns them for going too far. "Deceived in my opinions concerning the rigid system of Calvin, I no longer regarded that reformer in any other light but as one of those extravagant geniuses who are carried beyond the bounds of truth. Such appeared to me in general the founders of the reformation; and that just idea which I have now obtained of their character has enabled me to shake off a load of prejudices. I saw in most of the articles which have separated them from us, such as the invocation of saints, the worship of images, the distinction of meats, &c. that they had much exaggerated the inevitable abuses of the people, and imputed these to the Romish church, as if sanctioned by its doctrines. Besides, that they have misrepresented those doctrines which were not connected with any abuse. One thing which surprised me much when my eyes began to open, was the false idea, though in appearance full

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full of respect, for the word of God, which the reformers entertained of the perfection and perspicuity of the Holy Scriptures, and the manifest misinterpretation of passages which they bring to support that idea (for that misinterpretation is a point which can be proved). Two or three articles still raised some objections in my mind against the Romish church; to wit, Transubstantiation, the adoration of the sacrament, and the infallibility of the church. The adoration of the sacrament I considered as idolatry, and, on that account, removed from her communion. But soon after, the Exposition of the bishop of Meaux, a work which can never be sufficiently admired, and his Treatise concerning changes, reversed all my opinions, and rendered me an enemy to the Reformation." It is said also, that Saurin appeased his conscience by reading Poiret's *Cogitationes rationales*. This book is written with a view to vindicate the church of Rome from the charge of idolatry.

If it was the love of distinction that induced Saurin to return to the Romish church, he was not disappointed; for he there met with protection and support. He was favourably received by Louis XIV. obtained a pension from him, and was treated by the Academy of Sciences with the most flattering respect. At that time (1717), geometry formed his principal occupation. He adorned the *Journal des Savans* with many excellent treatises; and he added to the memoirs of the Academy many interesting papers. These are the only works which he has left behind him. He died at Paris on the 29th December 1737, in his 78th year, of a fever. He married a wife of the family of Crousas in Switzerland, who bore him a son, Bernard-Joseph, distinguished as a writer for the theatre.

Saurin was of a bold and impetuous spirit. He had that lofty deportment which is generally mistaken for pride. His philosophy was austere; his opinions of men were not very favourable; and he often delivered them in their presence: this created him many enemies. His memory was attacked after his decease. A letter was printed in the *Mercure Suisse*, said to be written by Saurin from Paris, in which he acknowledges that he had committed several crimes which deserved death. Some Calvinist ministers published in 1757 two or three pamphlets to prove the authenticity of that letter; but Voltaire made diligent enquiry not only at the place where Saurin had been discharging the sacerdotal office, but at the Deans of the clergy of that department. They all exclaimed against an imputation so opprobrious. It must not, however, be concealed, that Voltaire, in the defence which he has published in his general history of Saurin's conduct, leaves some unfavourable impressions upon the reader's mind. He insinuates, that Saurin sacrificed his religion to his interest; that he played upon Bossuet, who believed he had converted a clergyman, when he had only given a little fortune to a philosopher.

SAURURUS, in botany: A genus of the tetragynia order, belonging to the heptandria class of plants; and in the natural method ranking under the second order, *Piperita*. The calyx is a catkin, with uniflorous scales: there is no corolla; there are four germina, and four monospermous berries.

SAUVAGESIA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants; and in the natural method ranking with those

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of which the order is doubtful. The corolla is pentapetalous and fringed; the calyx pentaphyllous; the nectarium the same, having its leaves placed alternately with the petals; the capsule unilocular.

SAUVEUR (Joseph), an eminent French mathematician, born at La Fleche in 1653. He was absolutely dumb until he was seven years of age; and even then his organs of speech did not disengage themselves so freely, but that he was ever after obliged to speak with great deliberation. Mathematics were the only studies he had any relish for, and these he cultivated with extraordinary success; so that he commenced teacher at 20 years of age, and was so soon in vogue, that he had prince Eugene for his scholar. He was made mathematical professor in the royal college in 1686; and ten years after was admitted a member of the Academy of Sciences. He died in 1716; and his writings, which consist rather of detached papers than of connected treatises, are all inserted in the Memoirs of the Academy of Sciences. He was twice married; and by the last wife had a son, who, like himself, was dumb for the first seven years of his life.

SAW, an instrument which serves to cut into pieces several solid matters; as wood, stone, ivory, &c.

The best saws are of tempered steel ground bright and smooth: those of iron are only hammer-hardened: hence the first, besides their being stiffer, are likewise found smoother than the last. They are known to be well hammered by the stiff bending of the blade; and to be well and evenly ground, by their bending equally in a bow.

Saw-f/b. See **PRISTIS**.

SAXE (Maurice count of), was born the 13th October 1696. He was the natural son of Frederic Augustus II. elector of Saxony, and king of Poland, and of the countess of Konigsmarc, a Swedish lady, celebrated both for her wit and beauty. He was educated along with Frederic Augustus the electoral prince, afterwards king of Poland. His infancy announced the future warrior. Nothing could prevail on him to apply to his studies but the promise of being allowed, after he had finished his task, to mount on horseback, or exercise himself with arms.

He served his first campaign in the army commanded by prince Eugene and the duke of Marlborough, when only twelve years old. He signalized himself at the sieges of Tournay and Mons, and particularly at the battle of Malplaquet. In the evening of that memorable day, he was heard to say, "I'm content with my day's work." During the campaign of 1710, prince Eugene and the duke of Marlborough made many public encomiums on his merit. Next year the young count accompanied the king of Poland to the siege of Stralsund, the strongest place in Pomerania, and displayed the greatest intrepidity. He swam across the river in sight of the enemy, with a pistol in his hand. His valour shone no less conspicuously on the bloody day of Gaedelbusck, where he commanded a regiment of cavalry. He had a horse killed under him, after he had three times rallied his regiment, and led them on to the charge.

Soon after that campaign, his mother prevailed on him to marry the countess of Lubin, a lady both rich and beautiful. This union lasted but a short time. In 1721, the count procured a dissolution of the marriage;

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a step of which he afterwards repented. The countess left him with regret; but this did not prevent her from marrying soon after. The count of Saxe was too fond of pleasure and variety to submit to the duties which marriage imposes. In the midst, however, of the pleasures in which he sometimes indulged, he never lost sight of his profession. He carried along with him wherever he went a library of military books; and even when he seemed most taken up with his pleasures, he never failed to spend an hour or two in private study.

In 1717 he went to Hungary, where the emperor had an army of 15,000 men under the command of prince Eugene. Young count Saxe was present at the siege of Belgrade, and at a battle which the prince gained over the Turks. On his return to Poland in 1718, he was made a knight of the golden eagle.

The wars in Europe being concluded by the treaties of Utrecht and Passarowitz, count Saxe went to France. He had always professed a partiality for that country. French, indeed, was the only foreign language which during his infancy he was willing to learn. He spent his whole time during the peace in studying mathematics, fortification, and mechanics, sciences which exactly suited his genius. The mode of exercising troops had struck his attention when very young. At 16 he invented a new exercise, which was taught in Saxony with the greatest success. Having obtained a regiment in France in 1722, he formed it himself according to his new plan. From that moment the *Chevalier Follet*, an excellent judge of military talents, predicted that he would be a great man.

In 1726 the States of Courland chose him for their sovereign. But both Poland and Russia rose in arms to oppose him. The Czarina wished to bestow the duchy on Menzikoff, a happy adventurer, who from a pastry-cook's boy became a general and a prince. Menzikoff sent 800 Russians to Milan, where they besieged the new-chosen duke in his palace. Count Saxe, who had only 60 men, defended himself with astonishing intrepidity. The siege was raised, and the Russians obliged to retreat. Soon after he retired to Usmaiz, and prepared to defend his people against the two hostile nations. Here he remained with only 300 men, till the Russian general approached at the head of 4000 to force his retreat. That general invited the count to a conference, during which he intended to surprise him, and take him prisoner. The count, informed of the plot, reproached him for his baseness, and broke up the conference. About this time he wrote to France for men and money. Mademoiselle le Couvreur, a famous actress, pawned her jewels and plate, and sent him the sum of 40,000 livres. This actress had formed his mind for the fine arts. She had made him read the greater part of the French poets, and given him a taste for the theatre, which he retained even in the camp. The count, unable to defend himself against Russia and Poland, was obliged in the year 1729 to leave his new dominions, and retire into France. It is said that Anne Iwanowa, duchess dowager of Courland, and second daughter of the czar Iwan Alexiowitz, had given him hopes of marriage, and abandoned him at that time because she despaired of fixing his wavering passion.— This inconstancy lost him not only Courland, but the throne of Russia itself, which that Princess afterwards filled.

Saxe.

Count Saxe, thus stripped of his territories, devoted himself for some time to the study of mathematics. He composed also, in 13 nights, and during the intervals of an ague, his *Reveries*, which he corrected afterwards. This book is written in an incorrect but forcible style; it is full of remarks both new and profound, and is equally useful to the soldier and the general.

The death of the king of Poland his father, in 1733, kindled a new war in Europe. His brother, the elector of Saxony, offered him the command of all his forces, but he preferred the French service, and repaired to the marshal of Berwick's army, which was encamped on the Rhine. "Count," said that general, who was preparing to attack the enemy's entrenchments at Etlinghen, "I was going to send for 3000 men, but your arrival is of more value than theirs." When the attack began, the count, at the head of a regiment of grenadiers, forced the enemy's lines, and by his bravery decided the victory. He behaved at the siege of Philipburgh with no less intrepidity. For these services he was, in 1734, rewarded with the rank of lieutenant-general. Peace was concluded in 1736; but the death of Charles VI. emperor of Germany kindled a new war almost immediately.

Prague was besieged by the count of Saxe in 1741, near the end of November, and taken the same month by assault. The conquest of Egra followed that of Prague. It was taken a few days after the trenches were opened. This success gave so much joy to the Emperor Charles VII. that he wrote a congratulatory letter to the conqueror with his own hands.

In 1744 he was made marshal of France, and commanded a part of the French army in Flanders. During that campaign he displayed the greatest military conduct. Though the enemy was superior in number, he observed their motions so skilfully that they could do nothing.

In January 1745, an alliance was concluded at Warsaw between the queen of Hungary, the king of England, and the States of Holland. The ambassador of the States General, meeting marshal Saxe one day at Versailles, asked his opinion of that treaty. "I think (says he), that if the king my master would give me an unlimited commission, I would read the original at the Hague before the end of the year." This answer was not a bravado; the marshal was capable of performing it.

He went soon after, though exceedingly ill, to take the command of the French army in the Low Countries. A gentleman seeing the feeble condition in which he left Paris, asked him how he could in that situation undertake so great an enterprise? "The question (replied he) is not about living, but setting out."— Soon after the opening of the campaign, the battle of Fontenoy was fought. Marshal Saxe was at the point of death, yet he caused himself to be put into a litter, and carried round all the posts. During the action he mounted on horseback, though he was so very weak that his attendants dreaded every moment to see him expire. The victory of Fontenoy, owing entirely to his vigilance and capacity, was followed by the reduction of Tournay, Bruges, Ghent, Oudenarde, Ostend, Ath, and Brussels: This last city was taken on the 28th February 1746; and very soon after the King sent to the marshal a letter of naturalization conceived in the most flattering

Saxe. flattering terms. The succeeding campaigns gained him additional honours. After the victory of Raucoux, which he gained on the 11th October 1746, the king of France made him a present of six pieces of cannon. He was, on the 12th of January of the following year, created marechal of all the French armies, and, in 1748, commander-general of all those parts of the Netherlands which were lately conquered.

Holland now began to tremble for her safety. Maestricht and Bergen-op-Zoom had already fallen, and nothing but misfortunes seemed to attend the further prosecution of the war. The States General, therefore, offered terms of peace, which were accepted, and a treaty concluded on the 18th October 1748.

Marechal Saxe retired to Chambord, a country seat which the king of France had given him. Some time after he went to Berlin, where the king of Prussia received him as Alexander would have received Cæsar.— On his return to France, he spent his time among men of learning, artists, and philosophers. He died of a fever, on the 30th November 1750, at the age of 54.

Some days before his death, talking to M. Senac his physician about his life, "It has been (says he) an excellent dream." He was remarkably careful of the lives of his men. One day a general officer was pointing out to him a post which would have been of great use. "It will only cost you (says he) a dozen grenadiers." "That would do very well," replied the marechal, "were it only a dozen lieutenant-generals."

It was impossible for marechal Saxe, the natural brother of the king of Poland, elected sovereign of Courland, and possessed of a vigorous and restless imagination, to be destitute of ambition. He constantly entertained the notion that he would be a king. After losing the crown of Russia by his inconstancy in love, he formed, it is said, the project of assembling the Jews, and of being the sovereign of a nation which for 1700 years had neither possessed chief nor country. When this chimerical idea could not be realized, he cast his eyes upon the kingdom of Corsica. After failing in this project also, he was busily employed in planning a settlement in some part of America, particularly Brazil, when death surprised him.

He had been educated and died in the Lutheran religion. "It is a pity (said the queen of France, when she heard of his death) that we cannot say a single *De profundis* (prayer for the dead) for a man who has made us sing so many *Te Deums*." All France lamented his death.

By his will, which is dated at Paris, March 1. 1748, he directed that his body should be buried in quicklime: "that nothing (says he) may remain of me in this world but the remembrance of me among my friends." These orders, however, were not complied with; for his body was embalmed, put into a leaden coffin, which was inclosed in another of copper, and this covered with one of wood, bound about with iron. His heart was put into a silver gilt box, and his entrails into another coffin. Louis XV. was at the charge of his funeral. By his order his corpse was interred with great pomp and splendour in the Lutheran church of St Thomas, at Strasburgh, on the 8th February 1751.

The marechal was a man of ordinary stature, of a robust constitution, and extraordinary strength. To

an aspect, noble, warlike, and mild, he joined the excellent qualities of the heart. Affable in his manners, and disposed to sympathize with the unfortunate, his generosity sometimes carried him beyond the limits of his fortune. On his death-bed he reviewed the errors of his life with remorse, and expressed much penitence.

The best edition of his *Reveries* was printed at Paris 1757, in 2 vols 4to. It was compared with the greatest attention with the original manuscript in the king's library. It is accompanied with many designs exactly engraved, and a Life of the Author. The Life of marechal Saxe was written by M. d'Espagnac, 2 vols. 12mo. This history is written in the panegyric style. The author is, however, impartial enough to remark, that in the three battles upon which the reputation of marechal Saxe is founded, he engaged in the most favourable circumstances. "Never did a general (says he) stand in a more advantageous situation. Honoured with the confidence of the king, he was not restrained in any of his projects. He always commanded a numerous army: his soldiers were steady, and his officers possessed great merit."

SAXIFRAGA, SAXIFRAGE, in botany: A genus of the digynia order, belonging to the decandria class of plants; and in the natural method ranking under the 13th order, *Succulenta*. The calyx is quinquepartite; the corolla pentapetalous; the capsule birostrated, unilocular, and polyspermous.

There are 38 species; of which the most remarkable are, 1. The *granulata*, or white saxifrage, which grows naturally in the meadows in many parts of England. The roots of this plant are like grains of corn, of a reddish colour without; from which arise kidney-shaped hairy leaves, standing upon pretty long footstalks.— The stalks are thick, a foot high, hairy, and furrowed: these branch out from the bottom, and have a few small leaves like those below, which sit close to the stalk: the flowers terminate the stalk, growing in small clusters; they have five white petals, inclosing ten stamina and the two styles. There is a variety of this with double flowers, which is very ornamental. 2. The *pyramidata*, with a pyramidal stalk, grows naturally on the mountains of Italy. The leaves are tongue-shaped, gathered into heads, rounded at their points, and have cartilaginous and sawed borders. The stalk rises two feet and a half high, branching out near the ground, forming a natural pyramid to the top. The flowers have five white wedge shaped petals, and ten stamina, placed circularly the length of the tube, terminated by roundish purple summits. When these plants are strong, they produce very large pyramids of flowers, which make a fine appearance. 3. The *punctata*, commonly called *London pride* or *none-so-pretty*, grows naturally on the Alps, and also in great plenty on a mountain of Ireland called *Mungerton*, in the county of Kerry in that island. The roots of this are perennial; the leaves are oblong, oval, and placed circularly at bottom. They have broad, flat, furrowed footstalks, and are deeply crenated at their edges, which are white. The stalk rises a foot high, is of a purple colour, stiff, slender, and hairy. It sends out from the side on the upper part several short footstalks, which are terminated by white flowers spotted with red. 4. The *oppositifolia*, grows natural-

Saxo,
Saxony.

ly on the Alps, Pyrenees, and Helvetian mountains: it is also found pretty plentifully growing upon Ingleborough hill in Yorkshire, Snowdon in Wales, and some other places. It is a perennial plant, with stalks trailing upon the ground, and are seldom more than two inches long, garnished with small oval leaves standing opposite, which lie over one another like the scales of fish: they are of a brown green colour, and have a resemblance of heath. The flowers are produced at the end of the branches, of a deep blue; and thus make a pretty appearance during their continuance, which is great part of March and the beginning of April. All these species are easily propagated by offsets, or by parting their roots.

Coxe's Travels into
Denmark.

SAXO-GRAMMATICUS, descended from an illustrious Danish (A) family, was born about the middle of the 12th century. Stephens, in his edition of Saxo-Grammaticus, printed at Soroc, indubitably proves, that he must have been alive in 1156, but cannot ascertain the exact place and time of his birth. See Stephens's *Prolegomena* to the Notes on Saxo-Grammaticus, p. 8, to 24; also Holberg, vol. i. p. 269.; and Mallet's North. Antiq. vol. i. p. 4. On account of his uncommon learning, Saxo was distinguished by the name of *Grammaticus*. He was provost of the cathedral church of Roskild, and warmly patronized by the learned and warlike Absalon, the celebrated archbishop of Lunden, at whose instigation he wrote the History of Denmark. His epitaph, a dry panegyric in bad Latin verses, gives no account of the era of his death, which happened, according to Stephens, in 1204. His history, consisting of 16 books, begins from the earliest account of the Danish annals, and concludes with the year 1186. According to the opinion of an accurate writer, the first part, which relates to the origin of the Danes, and the reigns of the ancient kings, is full of fables; but the eight last books, and particularly those which regard the events of his own times, deserve the utmost credit. He wrote in Latin; the style, if we consider the barbarous age in which he flourished, is in general extremely elegant, but rather too poetical for history. Mallet, in his *Histoire de Dannemarc*, vol. i. p. 182, says, "that Sperling, a writer of great erudition, has proved, in contradiction to the assertions of Stephens and others, that Saxo-Grammaticus was secretary to Absalon; and that the Saxo provost of Roskild was another person, and lived earlier."

Holberg.

SAXONY, the name of two circles of the German empire, an electorate, and a duchy of the same. The lower circle is bounded to the south by the circle of Upper Saxony, and a part of that of the Upper Rhine; to the north, by the duchy of Sleswick, belonging to the king of Denmark, and the Baltic; to the west, by the circle of Westphalia and the north sea; and to the east by the circle of Upper Saxony. The states belonging to it are the dukes and princes of Magdeburg and Bremen, Zell, Grubenhagen, Calenberg, Wolfenbüttele, Halberstadt, Mecklenburg-Schwerin, Mecklenburg-Güstrow, Holstein-Gluckstadt, Holstein-Gottorf,

Hildesheim, Saxe-Lawenburg; the archbishopric of Lubeck; the principalities of Schwerin, Ratzeburg, Blankenburg, Ranzau; the imperial cities of Lubeck, Gotzlar, Muhlhausen, Nordhausen, Hamburg, and Bremen. The dukes of Bremen and Magdeburg are alternately directors and summoning princes; but, ever since the year 1682, the diets which used generally to be held at Brunswick or Lunenburg have been discontinued. Towards the army of the empire, which, by a decree of the empire in 1681, was settled at 40,000 men, this circle was to furnish 1322 horsemen and 2707 foot; and of the 300,000 florins granted to the imperial chest in 1707, its quota was 31,271 florins; both which assessments are the same with those of Upper Saxony, Burgundy, Swabia, and Westphalia. This circle at present nominates only two assessors in the chamber-judicatory of the empire, of one of which the elector of Brunswick-Lunenburg has the nomination, who must be a Lutheran, and is the ninth in rank. The inhabitants of this circle are almost all Lutherans.

The circle of Upper Saxony is bounded by that of Franconia, the Upper Rhine, and Lower Saxony; and also by the Baltic sea, Prussia, Poland, Silesia, Lusatia, and Bohemia. It is of great extent, and contains the following states, viz. the electors of Saxony and Brandenburg, Saxe-Weimar, Saxe-Eisenach, Saxe-Cobourg, Saxe-Gotha, Saxe-Altenburg, Saxe-Querfurt, the Hither and Farther Pomerania, Camin, Anhalt, Quidlenburg, Gernrode, Walkenried, Schwarzburg, Sondershausen, Schwarzburg-Rudolstadt, Mansfeld, Stolberg, Barby, the counts of Reussen, and the counts of Schonberg. No diets have been held in this circle since the year 1683. The elector of Saxony has always been the sole summoning prince and director of it. Most of the inhabitants profess the Protestant religion. When the whole empire furnishes 40,000 men, the quota of this circle is 1322 horse and 2707 foot. Of the 300,000 florins granted by the empire in 1707, it contributed only 31,271 florins, 28 kruitzers, being rated no higher than those of Westphalia, Lower Saxony, Swabia, and Burgundy, though it is much larger. Agreeable to a resolution and regulation in 1654, this circle nominates now only two assessors of the chamber-court.

The electorate consists of the duchy of Saxony, the greatest part of the margravate of Meissen, a part of the Vogtland, and the northern half of the landgravate of Thuringia. The Lusatias also, and a part of the country of Henneberg, belong to it, but are no part of this circle. The soil of the electoral dominions lying in this circle is in general exceeding rich and fruitful, yielding corn, fruits, and pulse in abundance, together with hops, flax, hemp, tobacco, aniseed, wild saffron, wood; and in some places woad, wine, coals, porcelain clay, terra sigillata, fullers-earth, fine shiver, various sorts of beautiful marble, serpentine stone, and almost all the different species of precious stones. Sulphur also, alum, vitriol, sand, and free-stone, salt-springs, amber, turf, cinnabar, quicksilver, antimony, bismuth, arsenic, cobalt, and other minerals, are found in it. This country,

(A) Some authors have erroneously conjectured, from his name Saxo, that he was born in Saxony; but Saxe was no uncommon appellation among the ancient Danes. See Olaus Wormius *Monumenta Danica*, p. 186, and Stephens's *Prolegomena*, p. 10.

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country, besides the above articles, contains likewise valuable mines of silver, copper, tin, lead, and iron; and abounds in many places with horned cattle, sheep, horses, and venison. The principal rivers by which it is watered are the Elbe, the Scherze-Elster, the Mulde, the Saale, the Unstrut, the Weiße-Elster, and the Pleisse. These rivers, as well as the lakes and rivulets, abound in fish; and in the White-Elster are found beautiful pearls. This electorate is extremely well cultivated and inhabited, and is said to include about 250 great and small towns, upwards of 5000 villages, 196 royal manors, and near as many royal castles, besides private estates, and commanderies. The provincial diets here consist of three classes. The first is composed of the prelates, the counts, and lords, and the two universities of Leipzig and Wittenberg. To the second belong the nobility in general, immediate or mediate, that is, such as stand immediately under the chief-chancery or the aulic judicatories, and such as are immediately under the jurisdiction of the amtmann. The third class is formed of the towns in general. The general provincial diets are ordinarily held every six years; but there are others, called *selection diets*, which are convened commonly every two years. We would here observe, that not only these diets, but those in most of the other states of Germany, are at present extremely insignificant and unimportant, retaining little more than the shadow of their former power and privileges; for even the petty princes, though they depend upon their more potent neighbours, and must be careful not to give them any umbrage, are almost as absolute in their respective territories as the grand seignior himself. As to religion, it was in this country that the reformation took its rise in the 16th century, to which it hath ever since adhered, according to the doctrines of Luther*. The two late electors, when they embraced Popery in order to qualify themselves to be elected kings of Poland, gave the most solemn assurances to their people, that they would inviolably maintain the established religion and its professors in the full and free enjoyment of all their ecclesiastical rights, privileges, and prerogatives whatsoever, in regard to churches, worship, ceremonies, usages, universities, schools, benefices, incomes, profits, jurisdictions, and immunities. The electoral families still continue Roman Catholics, though they have lost the crown of Poland, for which they at first embraced Popery. With respect to ecclesiastical matters, the country is divided into parishes, and these again into spiritual inspections and consistories, all subordinate to the ecclesiastical council and upper consistory of Dresden, in which city and Leipzig the Calvinists and Roman Catholics enjoy the free exercise of their religion. Learning flourishes in this electorate; in which, besides the free-schools and gymnasia in most of the chief towns, are the two celebrated universities of Wittenberg and Leipzig, in the last of which are also societies for the liberal arts and the German language, with booksellers and printers of the greatest eminence. A great variety of manufactures are also carried on in this country. The principal are those of fine and coarse linen, thread, fine lace, paper, fine glasses and mirrors; porcelain, equal if not superior to that of China†; iron, brass, and steel wares; manufactures of gold and silver, cotton, wool, and silk; gloves, caps, hats, and tapestry; in which, and the natural productions mentioned above, together with dye-

ing, an important foreign commerce is carried on. A great addition has been made since the year 1718 to the electoral territories, by the extinction of the collateral branches of Zeitz, Merseburg, and Weissenfels, whose dominions devolved to the elder electoral branch, descended from the margraves of Meissen. The first of these, who was elector of Saxony, was Frederick the Warlike, about the beginning of the 15th century.

This elector styles himself duke of Saxony, Juliers, Cleve, and Berg, as also of Engern and Westphalia, arch-marshal and elector of the Holy Roman empire, landgrave in Thuringia, margrave of Meissen, and of Upper and Lower Lusatia, burgrave of Magdeburg, princely count of Henneberg, count of La Mark, Ravensberg, Barby, and Hanau, and lord of Ravensstein. Among the electors he is reckoned the sixth, as great-marshal of the empire, of which he is also vicar, during an interregnum, in all places not subject to the vicariate of the count palatine of the Rhine. He is moreover sole director of the circle; and in the vacancy of the see of Mentz claims the directorium at the diet of the empire. His matricular assessment, on account of the electorate, is 1984 florins, besides what he pays for other districts and territories. To the chamber-courts he contributes, each term, the sum of 1545 rix-dollars, together with 83 rix-dollars and 62 kruitzers on account of the county of Mansfeld. In this electorate, subordinate to the privy council, are various colleges for the departments of war, foreign affairs, the finances, fiefs, mines, police, and ecclesiastical affairs, together with high tribunals and courts of justice, to which appeals lie from the inferior. The revenues of this elector are as considerable as those of any prince in the empire, if we except those of the house of Austria. They arise from the ordinary and extraordinary subsidies of the states; his own demesnes, consisting of 72 bailiwicks; the impost on beer, and the fine porcelain of the country; tenths of corn, fruit, wine, &c. his own silver mines, and the tenths of those that belong to particulars: all which, added together, bring in an yearly revenue of betwixt 700,000 l. and 800,000 l. yet the electorate is at present deeply in debt. The regular troops commonly amount to 20,000 men, exclusive of the militia of the ban, the arriere-ban, and the body of miners and hunters, who are obliged in time of war to bear arms. The whole electorate is divided into circles.

The electoral circle, or the duchy of Saxony, is bounded by the circles of Meissen, Leipzig, and Thuringia, the principality of Anhalt, the marche of Brandenburg, and Lusatia. The principality of Anhalt lies across it, and divides it into two parts. Its greatest length and breadth is computed at about 40 miles; but though it is watered by the Elbe, the Black Elster, and the Mulde, it is not very fruitful, the soil for the most part consisting of sand. It contains 24 towns, three boroughs, betwixt 400 and 500 villages, 164 noblemens estates, 11 superintendencies, three inspections, under one consistory, and 11 prefectures or districts. The present duchy of Saxony is not to be confounded with the old; for the latter was of a much greater extent, and contained in it those large tracts anciently called *Eastphalia*, *Engern*, and *Westphalia*, of which the electoral circle was no part, but was taken by Albert the Bear, margrave of Salzwedel, from the Venedi. His

Saxony.

* See Reformation, n° 8.

† See Porcelain, n° 23, 24.

Saxony.

son Bernard obtaining the dignity of duke of Saxony from the emperor Frederic I. the name of *duchy* was given to this country; and the electoral dignity having been afterwards annexed to the duchy, it acquired thereby also the name of the *electoral circle*.

The country of Saxony is remarkable for being the mother of the present English nation; but concerning the Saxons themselves, previous to that period, we have very few particulars. The Saxons (says Mr Whitaker) have been derived by our historians from very different parts of the globe; India, the north of Asia, and the forests of Germany. And their appellation has been equally referred to very different causes; the name of their Indian progenitor, the plundering disposition of their Asiatic fathers, and the short hooked weapons of their warriors. But the real origin of the Saxons, and the genuine derivation of their name, seem clearly to be these.

In the earlier period of the Gallic history, the Celtæ of Gaul crossed the Rhine in considerable numbers, and planted various colonies in the regions beyond it. Thus the Volcæ Tectosages settled on one side of the Hercynian forest and about the banks of the Neckar, the Helvetii upon another and about the Rhine and Maine, the Boii beyond both, and the Senones in the heart of Germany. Thus also we see the Treviri, the Nervii, the Suevi, and the Marcomanni, the Quadi, the Venedi, and others, in that country; all plainly betrayed to be Gallic nations by the Gallic appellations which they bear, and all together possessing the greatest part of it. And, even as late as the conclusion of the first century, we find one nation on the eastern side of this great continent actually speaking the language of Gaul, and another upon the northern using a dialect nearly related to the British. But as all the various tribes of the Germans are considered by Strabo to be γίνονται Γαλαῖαι, or genuine Gauls in their origin; so those particularly that lived immediately beyond the Rhine, and are asserted by Tacitus to be indubitably native Germans, are expressly denominated Γαλαῖα, or Gauls, by Diodorus, and as expressly declared by Dio to have been distinguished by the equivalent appellation of *Celtæ* from the earliest period. And the broad line of nations, which extended along the ocean, and reached to the borders of Scythia, was all known to the learned in the days of Diodorus, by the same significant appellation of Γαλαῖαι, or Gauls.

Of these, the most noted were the Si-Cambri and Cimbri; the former being seated near the channel of the Rhine, and the latter inhabiting the peninsula of Jutland. And the denominations of both declare their original; and show them to have been derived from the common stock of the Celtæ, and to be of the same Celtic kindred with the Cimbri of our own Somersetshire, and the Cymbri or Cambrians of our own Wales. The Cimbri are accordingly denominated *Celtæ* by Strabo and Appian. And they are equally asserted to be Gauls by Diodorus; to be the descendants of that nation which sacked the city of Rome, plundered the temple of Delphi, and subdued a great part of Europe and some of Asia.

Immediately to the south of these were the Saxons, extending from the isthmus of the Chersonesus to the current of the Elbe. And they were equally Cel-

tic in their origin as their neighbours. They were denominated *Ambrones* as well as Saxons; and, as such, are included by Tacitus under the general appellation of *Cimbri*, and comprehended in Plutarch under the equal one of *Celto-Scythæ*. And the name of *Ambrones* appears particularly to have been Gallic; being common to the Saxons beyond the Elbe, and the Ligurians in Cisalpine Gaul; as both found to their surprise, on the irruption of the former into Italy with the Cimbri. And, what is equally surprising, and has been equally unnoticed by the critics, the Welsh distinguish England by the name of *Loegr* or *Liguria*, even to the present moment. In that irruption these Saxons, Ambrons, or Ligurians, composed a body of more than 30,000 men, and were principally concerned in cutting to pieces the large armies of Manlius and Cæpio. Nor is the appellation of *Saxons* less Celtic than the other. It was originally the same with the Belgic Sueffones of Gaul; the capital of that tribe being now intitled *Saifons* by the French, and the name of the Saxons pronounced *Saifon* by the Welsh, *Saxon* by the Scotch, and *Saifonach* or *Saxfonach* by the Irish. And the Sueffones or Saxones of Gaul derived their own appellation from the position of their metropolis on a river, the stream at Soissons being now denominated the *Aisne*, and formerly the *Axon*; Ueff-on or Axon importing only waters or a river, and S-ueff-on or S-ax-on the waters or the river. The Sueffones, therefore, are actually denominated the *Ueffones* by Ptolemy; and the Saxones are actually intitled the *Axonones* by Lucan.

These, with their brethren and allies the Cimbri, having been more formidable enemies to the Romans by land, than the Samnites, Carthaginians, Spaniards, Gauls, or Parthians, in the second century applied themselves to navigation, and became nearly as terrible by sea. They soon made themselves known to the inhabitants of the British isles by their piracies in the northern channels, and were denominated by them *Lochlyn* or *Lochlynach*; lud-lyn signifying the people of the wave, and the D being quiescent in the pronunciation. They took possession of the Orkney islands, which were then merely large shoals of sand, uncovered with woods, and overgrown with rushes; and they landed in the north of Ireland, and ravaged the country. Before the middle of the third century they made a second descent upon the latter, disembarked a considerable body of men, and designed the absolute subjection of the island. Before the conclusion of it, they carried their naval operations to the south, infested the British channel with their little vessels, and made frequent descents upon the coasts. And in the fourth and fifth centuries, acting in conjunction with the Picts of Caledonia and the Scots of Ireland, they ravaged all the eastern and south-eastern shores of Britain, began the formal conquest of the country, and finally settled their victorious soldiery in Lancashire.

SAY, or SAYE, in commerce, a kind of serge much used abroad for linings, and by the religious for shirts; with us it is used for aprons by several sorts of artificers, being usually dyed green.

SCAB. See ITCH and MEDICINE.

SCAB in Sheep. See SHEEP.

SCABIOSA, SCABIOUS, in botany: A genus of the monogynia order, belonging to the tetrandria class

Saxony

|| Scabiosa.

Scabrita
||
Scalado.

of plants; and in the natural method ranking under the 48th order, *Aggregata*. The common calyx is polyphyllous; the proper one is double superior; the receptacle is paleaceous or naked. The most remarkable species are, 1. The *arvensis*, or meadow-scabious, grows naturally in many places of Britain. It hath a strong, thick, fibrous root, sending out many branching stalks, which rise to the height of three feet; the lower leaves are sometimes almost entire, and at others they are cut into many segments almost to the midrib. The flowers are produced upon naked footstalks at the end of the branches; they are of a purple colour, and have a faint odour. 2. The *succisa*, or devil's bit, grows naturally in woods and moist places. This has a short tap-root, the end of which appears as if it was bitten or cut off, whence the plant has taken its name. The leaves are oval and spear-shaped, and smooth; the stalks are single, about two feet high, garnished with two leaves at each joint; they generally send out two short foot-stalks from their upper joint, standing opposite, which are terminated by purple flowers.—Both these have been recommended as aperient, sudorific, and expectorant; but the present practice has no dependence on them.

SCABRITA, in botany: A genus of the monogynia order, belonging to the tetrandria class of plants. The corolla is monopetalous, and salver-shaped; there are two seeds emarginated superior; the calyx is truncated.

SCÆVOLA (C. Mucius), a young Roman of illustrious birth, is particularly celebrated in the Roman history for a brave but unsuccessful attempt upon the life of Porfena king of Hetruria, about the year before Christ 504. See the article ROME, n^o 71.

SCÆVOLA, in botany; a genus of the monogynia order, belonging to the pentandria class of plants. The corolla is monopetalous; the tube slit longitudinally; the border quinquefid and lateral. The fruit is a plum inferior and monospermous; the nucleus bilocular.

SCAFFOLD, among builders, an assemblage of planks and boards, sustained by tressels and pieces of wood fixed in the wall; whereon masons, bricklayers, &c. stand to work, in building high walls, and plasterers in plastering ceilings, &c.

SCAFFOLD, also denotes a timber-work raised in the manner of an amphitheatre, for the more commodious viewing any show or ceremony: it is also used for a little stage raised in some public place, whereon to behead criminals.

SCALA-NOVA (anciently Neapolis), called by the Turks *Kousbadase*, is situated in a bay, on the slope of a hill, the houses rising one above another, intermixed with minarees and tall slender cypresses. "A street, through which we rode (says Dr Chandler †), was hung with goat-skins exposed to dry, died of a most lively red. At one of the fountains is an ancient coffin used as a cistern. The port was filled with small craft. Before it is an old fortress on a rock or islet frequented by gulls and seamews. By the water-side is a large and good khan, at which we passed a night on our return. This place belonged once to the Ephesians, who exchanged it with the Samians for a town in Caria."

SCALADO, or SCALLADE, in the art of war, a furious assault made on the wall or rampart of a city, or other fortified place, by means of ladders, without carrying on works in form, to secure the men.

SCALD-CREAM, sometimes also called *Clouted-cream*: a curious method of preparing cream for butter, almost peculiar to Devonshire. Dr Hales, in Philosophical Transactions, volume 49, page 342, 1755, part 1st, gives some account of the method of preparing this delicate and luxurious article: other writers also speak of it. With an elucidation or two, we shall nearly quote Mr Feltham's account from the Gentleman's Magazine, volume 61. part 2. It is there observed, that the purpose of making scald-cream is far superior butter than can be procured from the usual raw cream, being preferable for flavour and keeping; to which those accustomed are so partial, as seldom to eat any other. As leaden cisterns would not answer for scalding cream, the dairies mostly adopt brass pans, which hold from three to five gallons for the milk; and that which is put into those pans one morning, stands till the next, when, without disturbing it, it is set over (on a trivet) a steady brisk wood fire, devoid of smoke, where it is to remain from seven to fifteen minutes, according to the size of the pan, or the quantity in it: the precise time of removing it from the fire must be particularly attended to, and is, when the surface begins to wrinkle or to gather in a little, showing signs of being near the agitation of boiling, which it must by no means do; it is then instantly to be taken off, and placed in the dairy until the next morning, when the fine cream is thrown up, and may be taken for the table, or for butter, into which it is now soon converted by stirring it with the hand. Some know when to remove it from the fire by sounding the pan with the finger, it being then less sonorous; but this is only acquired by experience. Dr Hales observes, that this method of preparing milk will take off the ill taste it sometimes acquires from the cows feeding on turnips, cabbage, &c.

SCALDS, in the history of literature, a name given by the ancient inhabitants of the northern countries to their poets; in whose writings their history is recorded.

SCALE, a mathematical instrument consisting of several lines drawn on wood, brass, silver, &c. and variously divided, according to the purposes it is intended to serve; whence it acquires various denominations, as the *plain scale*, *diagonal scale*, *plotting scale*, &c. See GEOMETRY.

SCALE, in music, sometimes denominated a *gamut*, a *diagram*, a *series*, an *order*, a *diapason*. It consists of the regular gradations of sound, by which a composer or performer, whether in rising or descending, may pass from any given tune to another. These gradations are seven. When this order is repeated, the first note of the second is consentaneous with the lowest note of the first; the second of the former with the second of the latter; and so through the whole octave. The second order, therefore, is justly esteemed only a repetition of the first. For this reason the scale, among the moderns, is sometimes limited to an octave; at other times extended to the compass of any particular voice or instrument. It likewise frequently includes all the practical gradations of musical sound, or the whole number of octaves employed in composition or execution, arranged in their natural order.

SCALENE, or SCALENOUS TRIANGLE, *scalenum*, in geometry, a triangle whose sides and angles are unequal. See GEOMETRY.

Scald
||
Scalene.

† Travels
in Asia Mi-
nor.

SCA-

Scalenna,
Scaliger.

SCALENUS, in anatomy. See there, *Table of the Muscles.*

SCALIGER (Julius Cæsar), a learned critic, poet, physician, and philosopher; was born at the castle of Ripa, in the territories of Verona, in 1484; and is said to have been descended from the ancient princes of Verona, though this is not mentioned in the letters of naturalization he obtained in France in 1528. He learned the first rudiments of the Latin tongue in his own country; and in his 12th year was presented to the Emperor Maximilian, who made him one of his pages. He served that emperor 17 years, and gave signal proofs of his valour and conduct in several expeditions. He was present at the battle of Ravenna in April 1512, in which he had the misfortune to lose his father Benedict Scaliger, and his brother Titus; on which his mother died with grief: when being reduced to necessitous circumstances, he entered into the order of the Franciscans, and applied himself to study at Bologna; but soon after changing his mind with respect to his becoming a monk, he took arms again, and served in Piedmont. At which time a physician persuaded him to study physic, which he did at his leisure-hours, and also learned Greek; and at last the gout determined him, at 40 years of age, to abandon a military life. He soon after settled at Agen, where he married, and began to apply himself seriously to his studies. He learned first the French tongue, which he spoke perfectly in three months; and then made himself master of the Gascon, Italian, Spanish, German, Hungarian, and Sclavonian: but the chief object of his studies was polite literature. Meanwhile, he supported his family by the practice of physic. He did not publish any of his works till he was 47 years of age; when he soon gained a great name in the republic of letters. He had a graceful person, and so strong a memory, even in his old age, that he dictated to his son 200 verses which he had composed the day before, and retained without writing them down. He was so charitable, that his house was as it were an hospital for the poor and sick; and he had such an aversion to lying, that he would have no correspondence with those who were given to that vice; but, on the other hand, he had much vanity, and a satirical spirit, which created him many enemies. He died of a retention of urine in 1558. He wrote in Latin, 1. A Treatise on the Art of Poetry. 2. Exercitations against Carden: which works are much esteemed. 3. Commentaries on Aristotle's History of Animals, and on Theophrastus on Plants. 4. Some Treatises on Physic. 5. Letters, Orations, Poems, and other works, in Latin.

SCALIGER (Joseph Justus), one of the most learned critics and writers of his time; he was the son of the former, and was born at Agen in France in 1540. He studied in the college of Bourdeaux; after which his father took him under his own care, and employed him in transcribing his poems; by which means he obtained such a taste for poetry, that before he was 17 years old he wrote a tragedy upon the subject of Oedipus, in which he introduced all the poetical ornaments of style and sentiment. His father dying in 1558, he went to Paris the year following, with a design to apply himself to the Greek tongue. For this purpose he for two months attended the lectures of Turnebus; but finding that in the usual course he should be a long

time in gaining his point, he shut himself up in his closet, and by constant application for two years gained a perfect knowledge of that language. After which he applied to the Hebrew, which he learned by himself with great facility. He made no less progress in the sciences; and his writings procured him the reputation of one of the greatest men of that or any other age. He embraced the reformed religion at 22 years of age. In 1563, he attached himself to Lewis Casteignier de la Roch Pozay, whom he attended in several journeys; and in 1593, was invited to accept of the place of honorary professor of the university of Leyden, which he complied with. He died of a dropsy in that city in 1609. He was a man of great temperance; was never married; and was so close a student, that he often spent whole days in his study without eating; and though his circumstances were always very narrow, he constantly refused the presents that were offered him. He published many works; the principal of which are, 1. Notes on Seneca's Tragedies, on Varro, Aufonius, Pompeius Festus, &c. 2. His Latin Poems. 3. A Treatise *de Emendatione Temporum*. 4. Eusebius's Chronicle with Notes. 5. *Canones Isagogici*; and many other works. The collections intitled *Scaligeriana*, were collected from his conversations by one of his friends; and being ranged into alphabetical order, were published by Isaac Vossius.

SCALLOP, in ichthyology. See PECTEN.

In the Highlands of Scotland, the great scallop shell is made use of for the skimming of milk. In old times, it had a more honourable place; being admitted into the halls of heroes, and was the cup of their festivity when the tribe assembled in the hall of their chieftain.

SCALPEL, in surgery, a kind of knife used in anatomical dissections and operations in surgery.

SCALPER, or SCALPING-IRON, a surgeon's instrument used for scraping foul carious bones.

SCALPING, in military history, a barbarous custom, in practice among the Indian warriors, of taking off the tops of the scalps of the enemies skulls with their hair on. They preserve them as trophies of their victories, and are rewarded by their chiefs according to the number of scalps they bring in.

SCALPRA DENTALIA, instruments used by the surgeons to take off those black, livid, or yellow crusts which infest the teeth, and not only loose and destroy them, but taint the breath.

SCAMMONY, a concreted vegetable juice of a species of convolvulus, partly of the resin, and partly of the gum kind. See CONVULVULUS.

The best scammony comes from Aleppo, in light spongy masses, easily friable, of a shining ash-colour verging to black; when powdered, of a light grey or whitish colour: an inferior sort is brought from Smyrna, in more compact ponderous pieces, of a darker colour, and full of sand and other impurities. This juice is chiefly of the resinous kind; rectified spirit dissolves five ounces out of six, the remainder is a mucilaginous substance mixed with dross; proof-spirit totally dissolves it, the impurities only being left. It has a faint unpleasant smell, and a bitterish, somewhat acrimonious, taste.

Scammony is an efficacious and strong purgative. Some have condemned it as unsafe, and laid sundry ill qualities to its charge; the principal of which is, that

Scallop
||
Scammony.

Scand-lum
||
Scandina-
via.

its operation is uncertain, a full dose proving sometimes ineffectual, whilst at others a much smaller one occasions dangerous hypercathartes. This difference, however, is owing entirely to the different circumstances of the patient, and not to any ill quality or irregularity of operation of the medicine: where the intestines are lined with an excessive load of mucus, the scammony passes through without exerting itself upon them; where the natural mucus is deficient, a small dose of this or any other resinous cathartic irritates and inflames. Many have endeavoured to abate the force of this drug, and correct its imaginary virulence, by exposing it to the fume of sulphur, dissolving it in acid juices, and the like; but this could do no more than destroy as it were a part of the medicine, without making any alteration in the rest. Scammony in substance, judiciously managed, stands not in need of any corrector: if triturated with sugar or with almonds, it becomes sufficiently safe and mild in operation. It may likewise be conveniently dissolved by trituration in a strong decoction of liquorice, and then poured off from the feces; the college of Wertemberg assures us, that by this treatment it becomes mildly purgative, without being attended with gripes, or other inconveniences; and that it likewise proves inoffensive to the palate. The common dose of scammony is from three to twelve grains.

SCANDALUM MAGNATUM, in law, is a defamatory speech or writing to the injury of a person of dignity; for which a writ that bears the same name is granted for the recovery of damages.

SCANDERBEG, the surname of George Castriot king of Albinia, a province of Turkey in Europe, dependent on the Ottoman empire. He was delivered up with his three elder brothers as hostages, by their father, to Amurath II. sultan of the Turks, who poisoned his brothers, but spared him on account of his youth, being likewise pleased with his juvenile wit and amiable person. In a short time he became one of the most renowned generals of the age; and revolting from Amurath, he joined Hunniade Corvin, a most formidable enemy to the Ottoman power. He defeated the sultan's army, took Amurath's secretary prisoner, obliged him to sign and seal an order to the governor of Croia, the capital of Albania, to deliver up the citadel and city to the bearer of that order, in the name of the sultan. With this forged order he repaired to Croia; and thus recovered the throne of his ancestors, and maintained the independency of his country against the numerous armies of Amurath and his successor Mahommed II. who was obliged to make peace with this hero in 1461. He then went to the assistance of Ferdinand of Arragon, at the request of Pope Pius II. and by his assistance Ferdinand gained a complete victory over his enemy the count of Anjou. Scanderbeg died in 1467.

SCANDEROON. See ALEXANDRETTA.

SCANDINAVIA, a general name for the countries of Norway, Sweden, and Denmark, anciently under the dominion of one prince. The inhabitants of these countries, in former times, were excessively addicted to war. From their earliest years they applied themselves to the military art, and accustomed themselves to cold, fatigue, and hunger. Even the very sports of youth and childhood were dangerous.

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Scandina-
via.

They consisted in taking frightful leaps, climbing up the steepest rocks, fighting naked with offensive weapons, wrestling with the utmost fury; so that it was usual to see them grown up to be robust men, and terrible in the combat, at the age of 15. At this early age the young men became their own masters; which they did by receiving a sword, a buckler, and a lance. This ceremony was performed at some public meeting. One of the principal men of the assembly named the youth in public; after which he was obliged to provide for his own subsistence, and was either now to live by hunting, or by joining in some incursion against the enemy. Great care was taken to prevent the young men from too early connections with the female sex; and indeed they could have no hope to gain the affection of the fair, but in proportion to the courage and address they had shown in their military exercises. Accordingly, in an ancient song, we find Bartholin, king of Norway, extremely surprised that his mistress should prove unkind, as he could perform eight different exercises. The children were generally born in camps; and being inured from their infancy to behold nothing but arms, effusion of blood, and slaughter, they imbibed the cruel disposition of their fathers, and when they broke forth upon other nations, behaved rather like furies than like human creatures.

The laws of this people, in some measure, resembled those of the ancient Lacedemonians. They knew no virtue but bravery, and no vice but cowardice. The greatest penalties were inflicted on such as fled from battle. The laws of the ancient Danes declared such persons infamous, and excluded them from society. Among the Germans, cowards were sometimes suffocated in mud; after which they were covered over with hurdles, to show, says Tacitus, that though the punishment of crimes should be public, there are certain degrees of cowardice and infamy which ought to be buried in oblivion. Frotho king of Denmark enacted, by law, that whoever solicited an eminent post ought upon all occasions to attack one enemy, to face two, to retire only one step back from three, and never to make an actual retreat till assaulted by four. The rules of justice themselves were adapted and warped to these prejudices. War was looked upon as a real act of justice, and force was thought to be an incontestable title over the weak, and a visible mark that God had intended them to be subject to the strong. They had no doubt but that the intentions of the Deity had been to establish the same dependence among men that takes place among inferior creatures; and, setting out from this principle of the natural *inequality* among men, they had from thence inferred that the weak had no right to what they could not defend. This maxim was adopted with such rigour, that the name of divine judgment was given not only to the judicatory combat, but to conflicts and battles of all sorts; victory being, in their opinion, the only certain mark by which providence enables us to distinguish those whom it has appointed to command others.—Lastly, their religion, by annexing eternal happiness to the military virtues, gave the utmost possible degree of vigour to that propensity which these people had for war, and to their contempt of death, of which we shall now give some instances. We are informed that Harold, surnamed *Blaaland*, or *Blue-tooth*, a king of Denmark, who lived in the beginning

Scandina-
via.

ginning of the ninth century, had founded on the coasts of Pomerania a city named *Julin* or *Jomsburg*. To this place he sent a colony of young Danes, bestowing the government on a celebrated warrior called *Palnatoko*. In this colony it was forbidden to mention the word *fear*, even in the most imminent dangers. No citizen of Jomsburg was to yield to any number of enemies however great. The sight of inevitable death was not to be taken as an excuse for showing the smallest apprehension. And this legislator really appears to have eradicated from the minds of most of the youths bred up under him, all traces of that sentiment so natural and so universal, which makes men think on their destruction with horror. Nothing can show this better than a single fact in their history, which deserves to have place here for its singularity. Some of them having made an irruption into the territories of a powerful Norwegian lord, named *Haquin*, were overcome in spite of the obstinacy of their resistance; and the most distinguished among them being made prisoners, were, according to the custom of those times, condemned to death. The news of this, far from afflicting them, was on the contrary received with joy. The first who was led to punishment was content to say, without changing countenance, and without expressing the least sign of fear, "Why should not the same happen to me as did to my father? He died, and so must I." A warrior, named *Thorchill*, who was to cut off the head of the second, having asked him what he felt at the sight of death, he answered, "that he remembered too well the laws of Jomsburg to utter any words that denoted fear." The third, in reply to the same question, said, "he rejoiced to die with glory; and that he preferred such a death to an infamous life like that of Thorchill's." The fourth made an answer much longer and more extraordinary. "I suffer with a good heart; and the present hour is to me very agreeable. I only beg of you (added he, addressing himself to Thorchill) to be very quick in cutting off my head; for it is a question often debated by us at Jomsburg, whether one retains any sense after being beheaded. I will therefore grasp this knife in my hand; if, after my head is cut off, I strike it towards you, it will show I have not lost all sense; if I let it drop, it will be a proof of the contrary. Make haste therefore, and decide the dispute." Thorchill, adds the historian, cut off his head in a most expeditious manner; but the knife, as might be expected, dropt from his hand. The fifth showed the same tranquillity, and died rallying and jeering his enemies. The sixth begged of Thorchill, that he might not be led to punishment like a sheep: "Strike the blow in my face (said he), I will sit still without shrinking; and take notice whether I once wink my eyes, or betray one sign of fear in my countenance: for we inhabitants of Jomsburg are used to exercise ourselves in trials of this sort, so as to meet the stroke of death without once moving." He kept his promise before all the spectators, and received the blow without betraying the least sign of fear, or so much as winking with his eyes. The seventh, says the historian, was a very beautiful young man, in the flower of his age. His long hair, as fine as silk, floated in curls and ringlets on his shoulders. Thorchill asked him, what he thought of death? "I receive it willingly (said he), since I have fulfilled the greatest duty of life, and have seen

all those put to death whom I would not survive. I only beg of you one favour, not to let my hair be touched by a slave, or stained with my blood."

Neither was this intrepidity peculiar to the inhabitants of Jomsburg; it was the general character of all the Scandinavians, of which we shall only give this further instance. A warrior, having been thrown upon his back in wrestling with his enemy, and the latter finding himself without his arms, the vanquished person promised to wait, without changing his posture, till his antagonist fetched a sword to kill him; and he faithfully kept his word.—To die with his arms in his hand was the ardent wish of every free man; and the pleasing idea which they had of this kind of death led them to dread such as proceeded from old age and disease. The history of ancient Scandinavia is full of instances of this way of thinking. The warriors who found themselves lingering in disease, often availed themselves of their few remaining moments to shake off life, by a way that they supposed to be more glorious. Some of them would be carried into a field of battle, that they might die in the engagement. Others slew themselves: many procured this melancholy service to be performed by their friends, who considered it as a most sacred duty. "There is, on a mountain of Iceland, (says the author of an old Iceland romance), a rock so high, that no animal can fall from the top and live. Here men betake themselves when they are afflicted and unhappy. From this place all our ancestors, even without waiting for sickness, have departed into Eden. It is useless, therefore, to give ourselves up to groans and complaints, or to put our relations to needless expences, since we can easily follow the example of our fathers, who have all gone by the way of this rock."—When all these methods failed, and at last when Christianity had banished such barbarous practices, the disconsolate heroes consoled themselves by putting on complete armour as soon as they found their end approaching.

SCANDIX, SHEPHERDS NEEDLE, or *Venus Comb*, in botany: A genus of the digynia order, belonging to the pentandria class of plants; and in the natural method ranking under the 45th order, *Umbellata*. The corolla is radiating; the fruit subulated; the petals emarginated; the florets of the disc frequently male. The most remarkable species is the *odorata*, with angular furrowed seeds. It is a native of Germany; and has a very thick perennial root, composed of many fibres, of a sweet aromatic taste like aniseed, from which come forth many large leaves that branch out somewhat like those of fern, from whence it is named *sweet-fern*. The stalks grow four or five feet high, are fistulous and hairy; the flowers are disposed in an umbel at the top of the stalk, are of a white colour, and have a sweet aromatic scent.—This species is easily propagated by seeds, which, if permitted to scatter, will supply an abundance of young plants, that may be put into any part of the garden, and require no care.

SCANNING, in poetry, the measuring of verse by feet, in order to see whether or not the quantities be duly observed. The term is chiefly used in Greek and Latin verses. Thus an hexameter verse is scanned by resolving it into six feet; a pentameter, by resolving it into five feet, &c.

Scandina-
via
||
Scanning.

Scanto,
||
Scapula.

Swinburne's
Travels in
the two Si-
cilies.

SCANTO, or **SPAVENTO**, a sudden impression of horror upon the mind and body. It is extremely dreaded by the inhabitants of Sicily; and the wild ideas of the vulgar part of the inhabitants respecting it are almost incredible, and their dread of a sudden shock is no less surprising. There is scarce a symptom, disorder, or accident, they do not think may befall the human frame in consequence of the scanto. They are persuaded that a man who has been frightened only by a dog, a viper, scorpion, or any other creature, which he has an antipathy to, will soon be seized with the same pains he would really feel, had he been torn with their teeth, or wounded with their venomous sting; and that nothing can remove these nervous imaginary pangs but a strong dose of dilena, a species of cantharides found in Sicily.

SCAPE-GOAT, in the Jewish antiquities, the goat which was set at liberty on the day of solemn expiation. For the ceremonies on this occasion, see Levit. xvi. 5, 6, &c.

Some say, that a piece of scarlet cloth, in form of a tongue, was tied on the forehead of the scape-goat. *Hoff. Lex. Univ. in voc. Lingua.*

Many have been the disputes among the interpreters concerning the meaning of the word *scape goat*; or rather of *azazel*, for which *scape-goat* is put in our version of the Bible.

Spencer is of opinion, that *azazel* is a proper name, signifying the devil or evil dæmon. See his reasons in his book *De leg. Hebr. ritual.* Dissert. viii. Among other things, he observes, that the ancient Jews used to substitute the name *Samaël* for *Azazel*; and many of them have ventured to affirm, that at the feast of expiation they were obliged to offer a gift to Samael to obtain his favour. Thus also the goat, sent into the wilderness to *Azazel*, was understood to be a gift or oblation. Some Christians have been of the same opinion. But Spencer thinks that the genuine reasons of the ceremony were, 1. That the goat, loaded with the sins of the people, and sent to *Azazel*, might be a symbolical representation of the miserable condition of sinners. 2. God sent the goat thus loaded to the evil dæmons, to show that they were impure, thereby to deter the people from any conversation or familiarity with them. 3. That the goat sent to *Azazel*, sufficiently expiating all evils, the Israelites might the more willingly abstain from the expiatory sacrifices of the Gentiles.

SCAPULA, in anatomy, the shoulder, or shoulder-bone.

SCAPULA (John), the reputed author of a Greek lexicon, studied at Lausanne. His name is recorded in the annals of literature, neither on account of his talents nor learning, nor virtuous industry, but for a gross act of dissimulation and fraud which he committed against an eminent literary character of the 16th century. Being employed by Henry Stephens as a corrector to his press while he was publishing his *Thesaurus lingue Græcæ*, Scapula extracted those words and explanations which he reckoned most useful, comprised them in one volume, and published them as an original work, with his own name.

The compilation and printing of the *Thesaurus* had cost Stephens immense labour and expence; but it was so much admired by those learned men to whom he had

shown it, and seemed to be of such essential importance to the acquisition of the Greek language, that he reasonably hoped his labour would be crowned with honour, and the money he had expended would be repaid by a rapid and extensive sale. But before his work came abroad, Scapula's abridgment appeared; which, from its size and price, was quickly purchased, while the *Thesaurus* itself lay neglected in the author's hands. The consequence was, a bankruptcy on the part of Stephens, while he who had occasioned it was enjoying the fruits of his treachery. Scapula's *Lexicon* was first printed in 1570, in 4to. It was afterwards enlarged, and published in folio. It has gone through several editions, while the valuable work of Stephens has never been reprinted. Its success is, however, not owing to its superior merit, but to its price and more commodious size. Stephens charges the author with omitting a great many important articles. He accuses him of misunderstanding and perverting his meaning; and of tracing out absurd and trifling etymologies, which he himself had been careful to avoid. He composed the following epigram on Scapula:

*Quidam τραπεζῶν me capulo tenus abdidit ensē
Æger eram a Scapulis, sanus et huc redeo.*

Doctor Busby, so much celebrated for his knowledge of the Greek language, and his success in teaching it, would never permit his scholars at Westminster school to make use of Scapula.

SCAPULAR, in anatomy, the name of two pair of arteries, and as many veins.

SCAPULAR, or *Scapulary*, a part of the habit of several religious orders in the church of Rome, worn over the gown as a badge of peculiar veneration for the Blessed Virgin. It consists of two narrow slips or breadths of cloth covering the back and the breast, and hanging down to the feet.—The devotees of the *scapulary* celebrate its festival on the 10th of July.

SCARABÆUS, the **BEE-TLE**, in zoology, a genus of insects of the coleoptera order: the antennæ of the beetles are of a clavated figure, and fissile longitudinally; and their legs are frequently dentated. There are 87 species; all, however, concurring in one common formation of having cases to their wings, which are the more necessary to those insects, as they often live under the surface of the earth, in holes, which they dig out by their own industry. The cases prevent the various injuries their real wings might sustain by rubbing or crushing against the sides of their abode. These, though they do not assist flight, yet keep the internal wings clean and even, and produce a loud buzzing noise when the animal rises in the air.

If we examine the formation of all animals of the beetle kind, we shall find, as in shell fish, that their bones are placed externally, and their muscles within. These muscles are formed very much like those of quadrupeds; and are formed with such surprising strength, that, bulk for bulk, they are a thousand times stronger than those of a man. The strength of these muscles is of use in digging the animal's subterraneous abode, whither it most frequently returns, even after it becomes a winged insect capable of flying.

Besides the difference which results from the shape and colour of these animals, the size also makes a considerable one; some beetles being not larger than the

Scapular
Scarabæus.

Scarabæus. head of a pin; while others, such as the elephant beetle, are as big as one's fist. But the greatest difference among them is, that some are produced in a month, and in a single season go through all the stages of their existence; while others take near four years to their production, and live as winged insects a year more.

The may-bug, dorr-beetle, or cock-chaffer, has, like all the rest, a pair of cases to its wings, which are of a reddish brown colour, sprinkled with a whitish dust, which easily comes off. In some years their necks are seen covered with a red plate, and in others with a black; these, however, are distinct sorts, and their difference is by no means accidental. The fore-legs are very short, and the better calculated for burrowing in the ground, where this insect makes its retreat. It is well known, for its evening buzz, to children; but still more formidably introduced to the acquaintance of the husbandman and gardener, for in some seasons it has been found to swarm in such numbers as to eat up every vegetable production.

The two sexes in the may-bug are easily distinguished from each other, by the superior length of the tufts, at the end of the horns, in the male. They begin to copulate in summer; and at that season they are seen joined together for a considerable time. They fly about in this state, the one hanging pendant from the tail of the other. It has been supposed, that, like snails, they are hermaphrodites, as there seems to be a mutual infertion.

The female being impregnated, quickly falls to boring a hole into the ground, wherein to deposit her burden. This is generally about half a foot deep; and in it she places her eggs, which are of an oblong shape, with great regularity, one by the other. They are of a bright yellow colour, and no way wrapped up in a common covering, as some have imagined. When the female is lightened of her burden, she again ascends from her hole, to live, as before, upon leaves and vegetables, to buzz in the summer evening; and to lie hid among the branches of trees in the heat of the day.

In about three months after these eggs have been thus deposited in the earth, the contained insect begins to break its shell, and a small grub or maggot crawls forth, and feeds upon the roots of whatever vegetable it happens to be nearest. All substances, of this kind, seem equally grateful; yet it is probable the mother insect has a choice among what kind of vegetables she shall deposit her young. In this manner these voracious creatures continue in the worm state for more than three years, devouring the roots of every plant they approach, and making their way under ground in quest of food with great dispatch and facility. At length they grow to above the size of a walnut, being a great thick white maggot with a red head, which is seen most frequently in new turned earth, and which is so eagerly sought after by birds of every species. When largest, they are found an inch and a half long, of a whitish yellow colour; with a body consisting of twelve segments or joints, on each side of which there are nine breathing holes, and three red feet. The head is larger in proportion to the body, of a reddish colour, with a pincer before, and a semicircular lip, with which it cuts the roots of plants, and sucks out their moisture. As this insect

lives entirely under ground, it has no occasion for eyes, and accordingly it is found to have none; but is furnished with two feelers, which, like the crutch of a blind man, serve to direct its motions. Such is the form of this animal, that lives for years in the worm state under ground, still voracious, and every year changing its skin.

It is not till the end of the fourth year that this extraordinary insect prepares to emerge from its subterraneous abode, and even this is not effected but by a tedious preparation. About the latter end of autumn, the grub begins to perceive the approaches of its transformation: it then buries itself deeper and deeper in the earth, sometimes six feet beneath the surface; and there forms itself a capacious apartment, the walls of which it renders very smooth and shining by the excretions of its body. Its abode being thus formed, it begins soon after to shorten itself, to swell, and to burst its last skin in order to assume the form of a chrysalis. This, in the beginning, appears of a yellowish colour, which heightens by degrees, till at last it is seen nearly red. Its exterior form plainly discovers all the vestiges of the future winged insect, all the fore parts being distinctly seen; while, behind, the animal seems as if wrapped in swaddling clothes.

The young may-bug continues in this state for about three months longer; and it is not till the beginning of January that the aurelia divests itself of all its impediments, and becomes a winged insect completely formed. Yet still the animal is far from attaining its natural strength, health, and appetite. It undergoes a kind of infant imbecility; and unlike most other insects, that the instant they become flies are arrived at their state of full perfection, the may-bug continues feeble and sickly. Its colour is much brighter than in the perfect animal; all its parts are soft; and its voracious nature seems for a while to have entirely forsaken it. As the animal is very often found in this state, it is supposed, by those unacquainted with its real history, that the old ones, of the former season, have buried themselves for the winter, in order to revisit the sun the ensuing summer. But the fact is, the old one never survives the season; but dies, like all the other winged tribe of insects, from the severity of cold in winter.

About the latter end of May, these insects, after having lived for four years under ground, burst from the earth when the first mild evening invites them abroad. They are at that time seen rising from their long imprisonment, from living only upon roots, and imbibing only the moisture of the earth, to visit the mildness of the summer air, to choose the sweetest vegetables for their banquet, and to drink the dew of the evening. Wherever an attentive observer then walks abroad, he will see them bursting up before him in his pathway, like ghosts on a theatre. He will see every part of the earth, that had its surface beaten into hardness, perforated by their egression. When the season is favourable for them, they are seen by myriads buzzing along, hitting against every object that intercepts their flight. The mid-day sun, however, seems too powerful for their constitutions: they then lurk under the leaves and branches of some shady tree; but the willow seems particularly their most favourite food; there they lurk in clusters, and seldom quit

Scarabæus.

quit the tree till they have devoured all its verdure. In those seasons which are favourable to their propagation, they are seen in an evening as thick as flakes of snow, and hitting against every object with a sort of capricious blindness. Their duration, however, is but short, as they never survive the season. They begin to join shortly after they have been let loose from their prison; and when the female is impregnated, she cautiously bores a hole in the ground, with an instrument fitted for that purpose with which she is furnished at the tail; and there deposits her eggs, generally to the number of three-score. If the season and the soil be adapted to their propagation, these soon multiply as already described, and go through the various stages of their contemptible existence. This insect, however, in its worm state, though prejudicial to man, makes one of the chief repasts of the feathered tribe, and is generally the first nourishment with which they supply their young. Hogs will root up the land for them, and at first eat them greedily; but seldom meddle with them a second time. Rooks are particularly fond of these worms, and devour them in great numbers. The inhabitants of the county of Norfolk, some time since, went into the practice of destroying their rookeries; but in proportion as they destroyed one plague, they were pestered with a greater; and these insects multiplied in such an amazing abundance, as to destroy not only the verdure of the fields, but even the roots of vegetables not yet shot forth. One farm in particular was so injured by them in the year 1751, that the occupier was not able to pay his rent; and the landlord was not only content to lose his income for that year, but also gave money for the support of the farmer and his family. In Ireland they suffered so much by these insects, that they came to a resolution of setting fire to a wood, of some extent, to prevent their mischievous propagation.

Bath Pa-
pers, vol. i.
p. 265.

"Neither the severest frosts in our climate (says Mr Rack), nor even keeping them in water, will kill them. I have kept some in water near a week; they appeared motionless; but on exposing them to the sun and air a few hours, they recovered, and were as lively as ever. Hence it is evident they can live without air. On examining them with a microscope, I could never discover any organs for respiration, or perceive any pulsation. When numerous, they are not destroyed without great difficulty; the best method is, to plough up the land in thin furrows, and employ children to pick them up in baskets; and then strew salt and quick-lime, and harrow in. About 30 years since I remember many farmers' crops in Norfolk were almost ruined by them in their grub-state; and in the next season, when they took wing, the trees and hedges in many parishes were stripped bare of their leaves as in winter. At first the people used to brush them down with poles, and then sweep them up and burn them. One farmer made oath that he gathered 80 bushels; but their number seemed not much lessened, except just in his own fields."

The scarabæus carnifex, which the Americans call the *tumble-dung*, particularly demands our attention. It is all over of a dusky black, rounder than those animals are generally found to be, and so strong, though not much larger than the common black beetle, that if one of them be put under a brass candlestick, it will cause it to move backwards and forwards, as if it were by an

invisible hand, to the admiration of those who are not accustomed to the sight: but this strength is given it for much more useful purposes than those of exciting human curiosity; for there is no creature more laborious, either in seeking subsistence, or providing a proper retreat for its young. They are endowed with sagacity to discover subsistence by their excellent smelling, which directs them in flights to excrements just fallen from man or beasts, on which they instantly drop, and fall unanimously to work in forming round balls or pellets thereof, in the middle of which they lay an egg. These pellets, in September, they convey three feet deep in the earth, where they lie till the approach of spring, when the eggs are hatched and burst their nests, and the insects find their way out of the earth. They assist each other with indefatigable industry in rolling these globular pellets to the place where they are to be buried. This they are to perform with the tail foremost, by raising up their hinder part, and shoving along the ball with their hind-feet. They are always accompanied with other beetles of a larger size, and of a more elegant structure and colour. The breast of this is covered with a shield of a crimson colour, and shining like metal; the head is of the like colour, mixed with green; and on the crown of the head stands a shining black horn, bending backwards. These are called the *kings of the beetles*; but for what reason is uncertain, since they partake of the same dirty drudgery with the rest.

The *elephant-beetle* is the largest of this kind hitherto known; and is found in South America, particularly in Guinea and Surinam, as well as about the river Oroonoko. It is of a black colour; and the whole body is covered with a very hard shell, full as thick and as strong as that of a small crab. Its length, from the hinder part to the eyes, is almost four inches; and from the same part to the end of the proboscis or trunk, four inches and three quarters. The transverse diameter of the body is two inches and a quarter; and the breadth of each elytron, or case for the wings, is an inch and three-tenths. The antennæ or feelers are quite horny; for which reason the proboscis or trunk is moveable at its insertion into the head, and seems to supply the place of feelers; the horns are eight-tenths of an inch long, and terminate in points. The proboscis is an inch and a quarter long, and turns upwards; making a crooked line, terminating in two horns, each of which is near a quarter of an inch long; but they are not perforated at the end like the proboscis of other insects. About four-tenths of an inch above the head, or that side next the body, is a prominence or small horn; which, if the rest of the trunk were away, would cause this part to resemble the horn of a rhinoceros. There is indeed a beetle so called; but then the horns or trunk has no fork at the end, though the lower horn resembles this. The feet are all forked at the end, but not like lobsters' claws. See Plate CCCCXLIV.

SCARBOROUGH, a town of the North Riding of Yorkshire, seated on a steep rock, near which are such craggy cliffs that it is almost inaccessible on every side. On the top of this rock is a large green plain, with two wells of fresh water springing out of the rock. It has of late been greatly frequented on account of its mineral waters called the *Scarborough-Spa*; on which account it is much mended in the number and beauty of the buildings. The spring was under the cliff, part of which

Scarabæus,
Scarbo-
rough.

Scarbo-
rough,
Scardona.

which fell down in 1737, and the water was lost; but in clearing away the ruins in order to rebuild the wharf, it was recovered, to the great joy of the town. The waters of Scarborough are chalybeate and purging. The two wells are both impregnated with the same principles, in different proportions; though the purging well is the most celebrated, and the water of this is usually called the *Scarborough water*. When these waters are poured out of one glass into another, they throw up a number of air-bubbles; and if they are shaken for some time in a phial close stopped, and the phial be suddenly opened before the commotion ceases, they displace an elastic vapour, with an audible noise, which shows that they abound in fixed air. At the fountain they have a brisk, pungent, chalybeate taste; but the purging water tastes bitterish, which is not usually the case with the chalybeate one. They lose their chalybeate virtues by exposure and by keeping; but the purging water the soonest. They both putrefy by keeping; but in time recover their sweetness. Four or five half pints of the purging water drank within an hour, give two or three easy motions, and raise the spirits. The like quantity of the chalybeate purges less, but exhilarates more, and passes off chiefly by urine. These waters have been found beneficial in hectic fevers, weaknesses of the stomach, and indigestion; in relaxations of the system; in nervous, hysteric, and hypochondriacal disorders; in the green sickness, scurvy, rheumatism, and asthmatic complaints; in gleets, the fluor albus, and other preternatural evacuations; and in habitual costiveness. Here are assemblies and balls in the same manner as at Tunbridge. It is a place of some trade, has a very good harbour, and sends two members to parliament. E. Long. 54. 18. N. Lat. 0. 3.

SCARDONA, a sea-port town of Dalmatia, seated on the eastern banks of the river Cherca, with a bishop's see. It has been taken and retaken several times by the Turks and Venetians; and these last ruined the fortifications and its principal buildings in 1537; but they have been since put in a state of defence.

Travels into
Dalmatia.

"No vestiges (says Fortis) now remain visible of that ancient city, where the states of Liburnia held their assembly in the times of the Romans. I however transcribed these two beautiful inscriptions, which were discovered some years ago, and are preserved in the house of the reverend Canon Mercati. It is to be hoped, that, as the population of Scardona continues increasing, new lands will be broken up, and consequently more frequent discoveries made of the precious monuments of antiquity. And it is to be wished, that the few men of letters, who have a share in the regulation of this reviving city, may bestow some particular attention on that article, so that the honourable memorials of their ancient and illustrious country, which once held so eminent a rank among the Liburnian cities, may not be lost, nor carried away. It is almost a shame, that only six legible inscriptions actually exist at Scardona; and that all the others, since many more certainly must have been dug up there, are either miserably broken, or lost, or transported to Italy, where they lose the greatest part of their merit. Roman coins are very frequently found about Scardona, and several valuable ones were shown to me by that hospitable prelate Monsignor Trevisani, bishop and father of the rising settlement. One of the principal gentlemen of the place was so kind as to

give me several sepulchral lamps, which are marked by the name of *Fortis*, and by the elegant form of the letters appear to be of the best times. The repeated devastations to which Scardona has been exposed, have left it no traces of grandeur. It is now, however, beginning to rise again, and many merchants of Servia and Bosnia have settled there, on account of the convenient situation for trade with the upper provinces of Turkey. But the city has no fortifications, notwithstanding the assertion of P. Farlati to the contrary." E. Long. 17. 25. N. Lat. 43. 55.

SCARIFICATION, in surgery, the operation of making several incisions in the skin by means of lances or other instruments, particularly the cupping instrument. See SURGERY.

SCARLET, a beautiful bright red colour.

In painting in water-colours, minium mixed with a little vermilion produces a good scarlet: but if a flower in a print is to be painted a scarlet colour, the lights as well as the shades should be covered with minium, and the shaded parts finished with carmine, which will produce an admirable scarlet.

SCARLET-Fever. See MEDICINE, R^o 230.

SCARP, in fortification, is the interior talus or slope of the ditch next the place, at the foot of the rampart.

SCARP, in heraldry, the scarf which military commanders wear for ornament. It is borne somewhat like a battoon sinister, but is broader than it, and is continued out to the edges of the field, whereas the battoon is cut off at each end.

SCARPANTO, an island of the Archipelago, and one of the Sporades, lying to the south-west of the isle of Rhodes, and to the north-east of that of Candia. It is about 22 miles in length and 8 in breadth; and there are several high mountains. It abounds in cattle and game; and there are mines of iron, quarries of marble, with several good harbours. The Turks are masters of it, but the inhabitants are Greeks.

SCARPE, a river of the Netherlands, which has its source near Aubigny in Artois, where it washes Arras and Douay; after which it runs on the confines of Flanders and Hainault, passing by St Amand, and a little after falls into the Scheldt.

SCARRON (Paul), a famous burlesque writer, was the son of a counsellor in parliament, and was born at Paris about the end of the year 1610, or in the beginning of the succeeding year. His father marrying a second time, he was compelled to assume the ecclesiastical profession. At the age of 24 he visited Italy, where he freely indulged in licentious pleasures. After his return to Paris he persisted in a life of dissipation till a long and painful disease convinced him that his constitution was almost worn out. At length when engaged in a party of pleasure at the age of 27, he lost the use of those legs which danced so gracefully, and of those hands which could paint and play on the lute with so much elegance. In the year 1638 he was attending the carnival at Mens, of which he was a canon. Having dressed himself one day as a savage, his singular appearance excited the curiosity of the children of the town. They followed him in multitudes, and he was obliged to take shelter in a marsh. This wet and cold situation produced a numbness which totally deprived him of the use of his limbs; but notwithstanding this misfortune he continued gay and cheerful. He took up his residence at Paris,

Scarifica-
tion
||
Scarron.

Scarron

Paris, and by his pleasant humour soon attracted to his house all the men of wit about the city. The loss of his health was followed by the loss of his fortune. On the death of his father he entered into a process with his mother-in-law. He pleaded the cause in a ludicrous manner, though his whole fortune depended on the decision. He accordingly lost the cause. Mademoiselle de Hautefort, compassionating his misfortunes, procured for him an audience of the queen. The poet requested to have the title of *Valetudinarian* to her majesty. The queen smiled, and Scarron considered the smile as the commission to his new office. He therefore assumed the title of *Scarron, by the grace of God, unworthy valetudinarian to the queen.*

Cardinal Mazarine gave him a pension of 500 crowns; but that minister having received disdainfully the dedication of his *Typhon*, the poet immediately wrote a *Mazarinade*, and the pension was withdrawn. He then attached himself to the prince of Condé, and celebrated his victories. He at length formed the extraordinary resolution of marrying, and was accordingly, in 1651, married to Mademoiselle d'Aubigné (afterwards the famous Madam de Maintenon), who was then only 16 years of age. "At that time (says Voltaire) it was considered as a great acquisition for her to gain for a husband a man who was disfigured by nature, impotent, and very little enriched by fortune." When Scarron was questioned about the contract of marriage, he said he acknowledged to the bride two large invincible eyes, a very beautiful shape, two fine hands, and a large portion of wit. The notary demanded what dowry he would give her? Immediately replied Scarron, "The names of the wives of kings die with them, but the name of Scarron's wife shall live for ever." She restrained by her modesty his indecent buffooneries, and the good company which had formerly resorted to his house were not less frequent in their visits. Scarron now became a new man. He became more decent in his manners and conversation: and his gaiety, when tempered with moderation, was still more agreeable. But, in the mean time, he lived with so little economy, that his income was soon reduced to a small annuity and his marquise of Quinet. By the marquise of Quinet, he meant the revenue he derived from his publications, which were printed by one Quinet. He was accustomed to talk to his superiors with great freedom in his jocular style. In the dedication to his *Don Japhet d'Armenie*, he thus addresses the king. "I shall endeavour to persuade your majesty, that you would do yourself no injury were you to do me a small favour; for in that case I should become more gay: if I should become more gay, I should write sprightly comedies; and if I should write sprightly comedies, your majesty would be amused, and thus your money would not be lost. All this appears so evident, that I should certainly be convinced of it if I were as great a king as I am now a poor unfortunate man."

Though Scarron wrote comedies, he had neither time nor patience to study the rules and models of dramatic poetry. Aristotle and Horace, Plautus and Terence, would have frightened him; and perhaps he did not know that there was ever such a person as Aristophanes. He saw an open path before him, and he followed it. It was the fashion of the times to pillage the Spanish writers. Scarron was acquainted with that

language, and he found it easier to use the materials which were already prepared, than to rack his brain in inventing a subject; a restraint to which a genius like his could not easily submit. As he borrowed liberally from the Spanish writers, a dramatic piece did not cost him much labour. His labour consisted not in making his comic characters talk humorously, but in keeping up serious characters; for the serious was a foreign language to him. The great success of his *Jodelet Maître* was a vast allurements to him. The comedians who acted it eagerly requested more of his productions. They were written without much toil, and they procured him large sums. They served to amuse him. If it be necessary to give more reasons for Scarron's readiness to engage in these works, abundance may be had. He dedicated his books to his sister's greyhound bitch; and when she failed him, he dedicated them to a certain Monseigneur, whom he praised higher, but did not much esteem. When the office of historiographer became vacant, he solicited for it without success. At length Fouquet gave him a pension of 1600 livres. Christina queen of Sweden having come to Paris, was anxious to see Scarron. "I permit you (said she to Scarron) to fall in love with me. The queen of France has made you her valetudinarian, and I create you my *Roland*." Scarron did not long enjoy that title: he was seized with so violent a hiccup, that every person thought he would have expired. "If I recover (he said), I will make a fine satire on the hiccup." His gaiety did not forsake him to the last. Within a few minutes of his death, when his domestics were shedding tears about him, "My good friends (said he), I shall never make you weep so much for me as I have made you laugh." Just before expiring, he said, "I could never believe before that it is so easy to laugh at death." He died on the 14th of October 1660, in the 51st year of his age.

His works have been collected and published by Bruzen de la Martiniere, in 10 vols 12mo, 1737. There are, 1. The *Eneid* travestied, in 8 books. It was afterwards continued by Moreau de Braséy. 2. *Typhon*, or the *Gigantomachia*. 3. Many comedies; as, *Jodelet*, or the *Master Valet*; *Jodelet cuffed*; *Don Japhet d'Armenie*; *The Ridiculous Heir*; *Every Man his own Guardian*; *The Foolish Marquis*; *The Scholar of Salamanca*; *The False Appearance*; *The Prince Corsaire*, a tragi-comedy. Besides these, he wrote other pieces in verse. 4. His *Comic Romance* in prose, which is the only one of his works that deserves attention. It is written with much purity and gaiety, and has contributed not a little to the improvement of the French language. Scarron had great pleasure in reading his works to his friends as he composed them: he called it trying his works. Segrais and another of his friends coming to him one day, "Take a chair (says Scarron to them) and sit down, that I may examine my *Comic Romance*." When he observed the company laugh, "Very well (said he), my book will be well received since it makes persons of such delicate taste laugh." Nor was he deceived. His *Romance* had a prodigious run. It was the only one of his works that Boileau could submit to read. 5. Spanish Novels translated into French. 6. A volume of Letters. 7. Poems; consisting of Songs, Epistles, Stanzas, Odes, and Epigrams. The whole collection abounds with sprightliness and gaiety. Scarron

Scarron.

Scene,
Scenogra-
phy.

can raise a laugh in the most serious subjects; but his fallies are rather those of a buffoon than the effusions of ingenuity and taste. He is continually falling into the mean and the obscene. If we should make any exception in favour of some of his comedies, of some passages in his *Eneid* travestied, and his *Comic Romance*, we must acknowledge that all the rest of his works are only fit to be read by footmen and buffoons. It has been said that he was the most eminent man in his age for burlesque. This might make him an agreeable companion to those who chose to laugh away their time; but as he has left nothing that can instruct posterity, he has but little title to posthumous fame.

SCENE, in its primary sense, denoted a theatre, or the place where dramatic pieces and other public shows were exhibited; for it does not appear that the ancient poets were at all acquainted with the modern way of changing the scenes in the different parts of the play, in order to raise the idea of the persons represented by the actors being in different places.

The original scene for acting of plays was as simple as the representations themselves: it consisted only of a plain plot of ground proper for the occasion, which was in some degree shaded by the neighbouring trees, whose branches were made to meet together, and their vacancies supplied with boards, sticks, and the like; and to complete the shelter, these were sometimes covered with skins, and sometimes with only the branches of other trees newly cut down, and full of leaves. Afterwards more artificial scenes, or scenical representations, were introduced, and paintings used instead of the objects themselves. Scenes were then of three sorts; tragic, comic, and satyric. The tragic scene represented stately magnificent edifices, with decorations of pillars, statues, and other things suitable to the palaces of kings: the comic exhibited private houses with balconies and windows, in imitation of common buildings: and the satyric was the representation of groves, mountains, dens, and other rural appearances; and these decorations either turned on pivots, or slid along grooves, as those in our theatres.

To keep close to nature and probability, the scene should never be shifted from place to place in the course of the play: the ancients were pretty severe in this respect, particularly Terence, in some of whose plays the scene never shifts at all, but the whole is transacted at the door of some old man's house, whither with inimitable art he occasionally brings the actors. The French are pretty strict with respect to this rule; but the English pay very little regard to it.

Scene is also a part or division of a dramatic poem. Thus plays are divided into acts, and acts are again subdivided into scenes; in which sense the scene is properly the persons present at or concerned in the action on the stage at such a time: whenever, therefore, a new actor appears, or an old one disappears, the action is changed into other hands; and therefore a new scene then commences.

It is one of the laws of the stage, that the scenes be well connected; that is, that one succeed another in such a manner as that the stage be never quite empty till the end of the act. See POETRY.

SCENOGRAPHY, (from the Greek, *σκηνη* scene, and *γραφη* description), in perspective, a representation of a body on a perspective plane; or a description thereof

in all its dimensions, such as it appears to the eye. See *See; tie.* PERSPECTIVE.

SCEPTIC, *σκηπτικός*, from *σκηπτομαι*, "I consider, look about, or deliberate," properly signifies *considerative* and *inquisitive*, or one who is always weighing reasons on one side, and the other without ever deciding between them. It is chiefly applied to an ancient sect of philosophers founded by Pyrrho (see PYRRHO), who, according to Laertius, had various other denominations. From their master they were called *Pyrrhonians*; from the distinguishing tenets or characteristic of their philosophy they derived the name of *Aporetici*, from *απορειν*, "to doubt;" from their suspension and hesitation they were called *εσβεδικοί*, from *εσβειν*, "to stay or keep back;" and lastly, they were called *zetetici* or *seekers*, from their never getting beyond the search of truth.

That the sceptical philosophy is absurd, can admit of no dispute in the present age; and that many of the followers of Pyrrho carried it to the most ridiculous height, is no less true. But we cannot believe that he himself was so extravagantly sceptical as has sometimes been asserted, when we reflect on the particulars of his life, which are still preserved, and the respectful manner in which we find him mentioned by his contemporaries and writers of the first name who flourished soon after him. The truth, as far as at this distance of time it can be discovered, seems to be, that he learned from Democritus to deny the real existence of all qualities in bodies, except those which are essential to primary atoms, and that he referred every thing else to the perceptions of the mind produced by external objects, in other words, to appearance and opinion. All knowledge of course appeared to him to depend on the fallacious report of the senses, and consequently to be uncertain; and in this notion he was confirmed by the general spirit of the Eleatic school in which he was educated. He was further confirmed in his scepticism by the subtilties of the Dialectic schools, in which he had been instructed by the son of Stilpo; choosing to overturn the cavils of sophistry by recurring to the doctrine of universal uncertainty, and thus breaking the knot which he could not unloose. For being naturally and habitually inclined to consider immoveable tranquillity as the great end of all philosophy, he was easily led to despise the dissensions of the dogmatists, and to infer from their endless disputes, the uncertainty of the questions on which they debated; controversy, as it has often happened to others, becoming also with respect to him the parent of scepticism.

Pyrrho's doctrines, however new and extraordinary, were not totally disregarded. He was attended by several scholars, and succeeded by several followers, who preserved the memory of his notions. The most eminent of his followers was Timon (see TIMON), in whom the public succession of professors in the Pyrrhonic school terminated. In the time of Cicero it was almost extinct, having suffered much from the jealousy of the dogmatists, and from a natural aversion in the human mind to acknowledge total ignorance, or to be left in absolute darkness. The disciples of Timon, however, still continued to profess scepticism, and their notions were embraced privately at least by many others. The school itself was afterwards revived by Ptolæmeus a Cyrenian, and was continued by Ænesidemus a contemporary of Cicero, who wrote a treatise on the principles of the Pyrrhonic philosophy, the heads of which are preserved by Photius.

Sceptic.

Photius. From this time it was continued through a series of preceptors of little note to Sextus Empiricus, who also gave a summary of the sceptical doctrine.

A system of philosophy thus founded on doubt, and clouded with uncertainty, could neither teach tenets of any importance, nor prescribe a certain rule of conduct; and accordingly we find that the followers of scepticism were guided entirely by chance. As they could form no certain judgment respecting good and evil, they accidentally learned the folly of eagerly pursuing any apparent good, or of avoiding any apparent evil; and their minds of course settled into a state of undisturbed tranquillity, the grand postulatam of their system.

In the schools of the sceptics we find ten distinct topics of argument urged in support of the doctrine of uncertainty, with this precaution, however, that nothing could be positively asserted either concerning their number or their force. These arguments chiefly respect objects of sense: they place all knowledge in appearance; and, as the same things appear very different to different people, it is impossible to say which appearance most truly expresses their real nature. They likewise say, that our judgment is liable to uncertainty from the circumstance of frequent or rare occurrence, and that mankind are continually led into different conceptions concerning the same thing by means of custom, law, fabulous tales, and established opinions. On all these accounts they think every human judgment is liable to uncertainty; and concerning any thing they can only assert, that it seems to be, not that it is what it seems.

This doubtful reasoning, if reasoning it may be called, the sceptics extended to all the sciences in which they discovered nothing true, or which could be absolutely asserted. In all nature, in physics, morals, and theology, they found contradictory opinions, and inexplicable or incomprehensible phenomena. In physics, the appearances they thought might be deceitful; and respecting the nature of God and the duties of morality, men were, in their opinion, equally ignorant and uncertain. To overturn the sophistical arguments of these sceptical reasoners would be no difficult matter, if their reasoning were worthy of confutation. Indeed, their great principle is sufficiently, though shortly, refuted by Plato, in these words. "When you say all things are incomprehensible (says he), do you comprehend or conceive that they are thus incomprehensible, or do you not? If you do, then something is comprehensible; if you do not, there is no reason we should believe you, since you do not comprehend your own assertion."

But scepticism has not been confined entirely to the ancients and to the followers of Pyrrho. Numerous sceptics have arisen also in modern times, varying in their principles, manners, and character, as chance, prejudice, vanity, weakness, or indolence, prompted them. The great object, however, which they seem to have in view, is to overturn, or at least to weaken, the evidence of analogy, experience, and testimony; though some of them have even attempted to show, that the axioms of geometry are uncertain, and its demonstrations inconclusive. This last attempt has not indeed been often made; but the chief aim of Mr Hume's philosophical writings is to introduce doubts into every branch of physics, metaphysics, history, ethics, and theology. It is needless to give a specimen of his reasonings in support of modern scepticism. The most important of them have

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been noticed elsewhere (see MIRACLE, METAPHYSICS, and PHILOSOPHY, n° 41.); and such of our readers as have any relish for speculations of that nature can be no strangers to his Essays, or to the able confutations of them by the Doctors Reid, Campbell, Gregory, and Beattie, who have likewise exposed the weakness of the sceptical reasonings of Des Cartes, Malbranche, and other philosophers of great fame in the same school.

SCEPTICISM, the doctrines and opinions of the sceptics. See the preceding article.

SCEPTRE, a kind of royal staff, or baton, borne on solemn occasions by kings, as a badge of their command and authority. Nicod derives the word from the Greek σκηπτρον, which he says originally signified "a javelin," which the ancient kings usually bore as a badge of their authority; that instrument being in very great veneration among the heathens. But σκηπτρον does not properly signify a javelin, but a staff to rest upon, from σκηπτω, innitor, "I lean upon." Accordingly, in the simplicity of the earlier ages of the world, the sceptres of kings were no other than long walking-staves: and Ovid, in speaking of Jupiter, describes him as resting on his sceptre (Met. i. v. 178.) The sceptre is an ensign of royalty of greater antiquity than the crown. The Greek tragic and other poets put sceptres in the hands of the most ancient kings they ever introduce. Justin observes, that the sceptre, in its original, was an *hasta*, or spear. He adds, that, in the most remote antiquity, men adored the *hasta* or sceptres as immortal gods; and that it was upon this account, that, even in his time, they still furnished the gods with sceptres.—Neptune's sceptre is his trident. Tarquin the Elder was the first who assumed the sceptre among the Romans. Le Gendre tells us, that, in the first race of the French kings, the sceptre was a golden rod, almost always of the same height with the king who bore it, and crooked at one end like a crozier. Frequently instead of a sceptre, kings are seen on medals with a palm in their hand. See REGALIA.

SCHÆFFERA, in botany: A genus of the tetrandria order, belonging to the diœcia class of plants; and in the natural method ranking with those that are doubtful. The calyx is quadripetalous; the corolla is quadripetalous, quinquepetalous, and often wanting; the fruit is a bilocular berry with one seed. Of this there are two species, both natives of Jamaica; and grow in the lowlands near the sea: viz. 1. *The Completa*. 2. *Lateriflora*.

SCHAFFHAUSEN, a large, handsome, and strong town of Swisserland, capital of a canton of the same name, with a castle in the form of a citadel. It is well built, with fine large streets, and adorned with several fountains; and the greatest part of the houses are painted on the outside. It is well fortified, and the cathedral is the largest church in Swisserland; besides which, the minster, with the monastery adjoining thereto, the arsenal, the town-house, the great clock (which shows the course of the sun and moon with their eclipses), and the stone bridge over the Rhine, are well worth the observation of a traveller. That river is of great consequence to the inhabitants with regard to trade. E. Long. 8. 51. N. Lat. 47. 39.

The Canton of SCHAFFHAUSEN, in Swisserland, is bounded on the north and west by Suabia; on the east by the canton of Zurich, and the bishoprick of Constance;

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stance; and on the south by the same, and by Thurgaw. It is 22 miles in length, and 10 in breadth; but produces all the necessaries of life, as wine, fish, wood, flax, horses, sheep, wool, black cattle, and deer. The principal town is of the same name.

SCHEDULE, a scroll of paper or parchment, annexed to a will, lease, or other deed; containing an inventory of goods, or some other matter omitted in the body of the deed.—The word is a diminutive of the Latin *scheda*, or Greek *σχῆμα*, a leaf or piece of paper.

SCHEELE (Charles-William), was born on the 19th of December 1742, at Stralsund, where his father kept a shop. When he was very young, he received the usual instructions of a private school; and was afterwards advanced to an academy. At a very early age he shewed a strong desire to follow the profession of an apothecary, and his father suffered him to gratify his inclinations. With Mr Bauch, an apothecary at Gottenburg, he passed his apprenticeship, which was completed in six years. He remained, however, some time longer at that place, and it was there that he so excellently laid the first foundations of his knowledge. Among the various books which he read, that treated of chemical subjects, Kunckel's Laboratory seems to have been his favourite. He used to repeat many of the experiments contained in that work privately in the night, when the rest of the family had retired to rest. A friend of Scheele's had remarked the progress which he had made in chemistry, and had asked him by what inducements he had been at first led to study a science in which he had gained such knowledge? Scheele returned the following answer: "The first cause, my friend, arose from yourself. Nearly at the beginning of my apprenticeship you advised me to read Neuman's Chemistry; from the perusal of which I became eager to make experiments myself; and I remember very well how I mixed together, in a conserve-glass, oil of cloves and fuming acid of nitre, which immediately took fire. I see also still before my eyes an unlucky experiment which I made with pyrophorus. Circumstances of this kind did but the more inflame my desire to repeat experiments." After Scheele's departure from Gottenburg, in the year 1765, he obtained a place with Kalstrom, an apothecary at Malmo. Two years afterwards he went from thence to Stockholm, and managed there the shop of Mr Scharenberg. In 1773, he changed this appointment for another at Upsal, under Mr Loock. Here he was fortunately situated; as, from his acquaintance with learned men, and from having free access to the University Laboratory, he had opportunities of increasing his knowledge. At this place also he happily commenced the friendship which subsisted between him and Bergman. During his residence at this place, his Royal Highness Prince Henry of Prussia, accompanied by the Duke of Sun-

derland, visited Upsal, and chose this opportunity to see the Academical Laboratory. Scheele was accordingly appointed by the University to exhibit some chemical experiments to them. This office he undertook, and shewed some of the most curious processes in chemistry. The two Princes asked him many questions, and expressed their approbation of the answers which he returned to them. The Duke asked him what countryman he was, and seemed to be much pleased when Scheele informed him that he was born at Stralsund. At their departure they told the professor, who was present, that they should esteem it a favour if he would permit the young man to have free access to the Laboratory, as often as he chose, to make experiments.

In the year 1777 Scheele was appointed by the Medical College to be apothecary at Koping. It was at that place that he soon shewed the world how great a man he was, and that no place or situation could confine his abilities. When he was at Stockholm he shewed his acuteness as a chemist, as he discovered there the new and wonderful acid contained in the sparry fluor. It has been confidently asserted, that Scheele was the first who discovered the nature of the aerial acid; and that whilst he was at Upsal he made many experiments to prove its properties. This circumstance might probably have furnished Bergman with the means of handling this subject more fully. At the same place he began the series of excellent experiments on that remarkable mineral substance, manganese; from which investigation he was led to make the very valuable and interesting discovery of the dephlogisticated marine acid. At the same time he first observed the ponderous earth.

At Koping he finished his dissertation on Air and Fire; a work which the celebrated Bergman most warmly recommended in the friendly preface which he wrote for it. The theory which Scheele endeavours to prove in this treatise is, that fire consists of pure air and phlogiston. According to more recent opinions (if inflammable air be phlogiston), water is composed of these two principles. Of these opinions we may say, in the words of Cicero, "*Opiniones tam variae sunt, tamque inter se dissidentes, ut alterum profecto fieri potest, ut earum nulla, alterum certe non potest ut plus una, vera sit.*" The author's merit in this work, exclusive of the encomiums of Bergman, was sufficient to obtain the approbation of the public; as the ingenuity displayed in handling so delicate a subject, and the many new and valuable observations (A) which are dispersed through the treatise, justly entitled the author to that fame which his book procured him. It was spread abroad through every country, became soon out of print, was reprinted, and translated into many languages. The English translation is enriched with the notes of that accurate and truly philosophic genius Richard Kirwan, Esq.

Scheele now diligently employed himself in contributing to the Transactions of the Academy at Stockholm.

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(A) Scheele mentions in this work, in a cursory way, the decomposition of common salt by the calx of lead. Mr Turner, a gentleman who happily unites the skill of the manufacturer with the knowledge of the philosophic chemist, has also all the merit of this discovery, as he observed the same fact, without having been indebted to Scheele's hint on this subject. Mr Turner has done more; he has converted this discovery to some use in the arts; he produces mineral alkali for sale, arising from this decomposition; and from the lead which is united to the marine acid he forms the beautiful pigment called the *patent yellow*.

Scheele. He first pointed out a new way to prepare the salt of benzoïn. In the same year he discovered that arsenic, freed in a particular manner from phlogiston, partakes of all the properties of an acid, and has its peculiar affinities to other substances.

In a Dissertation on Flint, Clay, and Alum, he clearly overturned Beaumé's opinion of the identity of the siliceous and argillaceous earths. He published an Analysis of the Human Calculus. He shewed also a mode of preparing mercurius dulcis in the humid way, and improved the process of making the powder of Algaroth. He analysed the mineral substance called *molybdena*, or flexible black lead. He discovered a beautiful green pigment. He shewed us how to decompose the air of the atmosphere. He discovered that some neutral salts are decomposed by lime and iron. He decomposed plumbago, or the common black lead. He observed, with peculiar ingenuity, an acid in milk, which decomposes acetated alkali; and in his experiments on the sugar of milk, he discovered another acid, different in some respects from the above-mentioned acid and the common acid of sugar. He accomplished the decomposition of tungstein, the component parts of which were before unknown, and found in it a peculiar acid earth united to lime. He published an excellent dissertation on the different sorts of æther. He found out an easy way to preserve vinegar for many years. His investigation of the colouring matter in Prussian blue, the means he employed to separate it, and his discovery that alkali, sal ammoniac, and charcoal, mixed together, will produce it, are strong marks of his penetration and genius. He found out a peculiar sweet matter in expressed oils, after they have been boiled with litharge and water. He shewed how the acid of lemons may be obtained in crystals. He found the white powder in rhubarb, which Model thought to be selenite, and which amounts to one-seventh of the weight of the root, to be calcareous earth, united to the acid of sorrel. This suggested to him the examination of the acid of sorrel. He precipitated acetated lead with it, and decomposed the precipitate thus obtained by the vitriolic acid, and by this process he obtained the common acid of sugar; and by slowly dropping a solution of fixed alkali into a solution of the acid of sugar, he regenerated the acid of sorrel.—From his examination of the acids contained in fruits and berries, he found not one species of acid alone, viz. the acid of lemon, but another also, which he denominated the malaceous acid, from its being found in the greatest quantity in apples.

By the decomposition of Bergman's new metal (siderite) he shewed the truth of Meyer's and Klaproth's conjecture concerning it. He boiled the calx of siderite with alkali of tartar, and precipitated nitrated mercury by the middle salt which he obtained by this operation; the calx of mercury which was precipitated was found to be united to the acid of phosphorus; so that he demonstrates that this calx was phosphorated iron. He found also, that the native Prussian blue contained the same acid. He discovered by the same means, that the perlate acid, as it was called, was not an acid *sui generis*, but the phosphoric united to a small quantity of the mineral alkali. He suggested an improvement in the process for obtaining magnesia from Epsom salt; he advises the adding of an equal weight

of common salt to the Epsom salt, so that an equal weight of Glauber's salt may be obtained: but this will not succeed unless in the cold of winter. These are the valuable discoveries of this great philosopher, which are to be found in the Transactions of the Royal Society at Stockholm. Most of his essays have been published in French by Madame Picardet, and Mons. Moreveau of Dijon. Dr Beddoes also has made a very valuable present to his countrymen of an English translation of a greater part of Scheele's dissertations, to which he has added some useful and ingenious notes. The following discoveries of Scheele are not, we believe, published with the rest. He shewed what that substance is, which has been generally called 'the earth of the fluor spar.' It is not produced unless the fluor acid meet with siliceous earth. It appears from Scheele's experiments to be a triple salt, consisting of flint, acid of fluor, and fixed alkali. Scheele proved also, that the fluor acid may be produced without any addition of the vitriolic or any mineral acid: the fluor is melted with fixed alkali, and the fluorated alkali is decomposed by acetated lead. If the precipitate be mixed with charcoal dust, and exposed in a retort to a strong heat, the lead will be revived, and the acid of fluor, which was united to it, will pass into the receiver possessed of all its usual properties. This seems to be an ingenious and unanswerable proof of its existence.

He observed, that no pyrophorus can be made unless an alkali be present; and the reason why it can be prepared from alum and coal is, that the common alum always contains a little alkali, which is added in order to make it chrySTALLIZE; for if this be separated from it, no pyrophorus can be procured from it. His last dissertation was his very valuable observations on the acid of the gallnut. Ehrhart, one of Scheele's most intimate friends, asserts, that he was the discoverer of both of the acids of sugar and tartar. We are also indebted to him for that masterpiece of chemical decomposition, the separation of the acid of phosphorus from bones. This appears from a letter which Scheele wrote to Gahn, who has generally had the reputation of this great discovery. This acid, which is so curious in the eye of the chemist, begins to draw the attention of the physician. It was first used in medicine, united to the mineral alkali, by the ingenious Dr Pearson. The value of this addition to the materia medica cannot be better evinced than from the increase of the demand for it, and the quantity of it which is now prepared and sold in London.

We may stamp the character of Scheele as a philosopher from his many and important discoveries. What concerns him as a man we are informed of by his friends, who affirm, that his moral character was irreproachable. From his outward appearance, you would not at first sight have judged him to be a man of extraordinary abilities; but there was a quickness in his eye, which, to an accurate observer, would point out the penetration of his mind. He mixed but little with the crowd of common acquaintance; for this he had neither time nor inclination, as, when his profession permitted him, he was for the most part employed in his experimental inquiries. But he had a soul for friendship; nor could even his philosophical pursuits withhold him from truly enjoying the society of those whom he could esteem and love. Before he adopted any opinion, or a particular theory, he considered it with the greatest attention; but

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when once his sentiments were fixed, he adhered to them, and defended them with resolution. Not but that he was ingenuous enough to suffer himself to be convinced by weighty objections; as he has shewn that he was open to conviction.

His chemical apparatus was neither neat nor convenient; his laboratory was small and confined; nor was he particular in regard to the vessels which he employed in his experiments, as often the first phial which came to hand was placed in his sand-heat: so that we may justly wonder how such discoveries, and such elegant experiments, could have been made under such unfavourable circumstances. He understood none of the modern languages except the German and Swedish; so that he had not the advantage of being benefited by the early intelligence of discoveries made by foreigners, but was forced to wait till the intelligence was conveyed to him in the slow and uncertain channel of translation. The important services which Scheele did to natural philosophy entitled him to universal reputation; and he obtained it: his name was well known by all Europe, and he was member of several learned academies and philosophical societies.

It was often wished that he would quit his retirement at Koping, and move in a larger sphere. It was suggested to him, that a place might be procured in England, which might afford him a good income and more leisure; and, indeed, latterly an offer was made to him of an annuity of 300l. if he would settle in this country. But death, alas! put an end to this project. For half a year before this melancholy event, his health had been declining, and he himself was sensible that he would not recover. On the 19th of May 1786, he was confined to his bed; on the 21st he bequeathed all of which he was possessed to his wife (who was the widow of his predecessor at Koping, and whom he had lately married); and on the same day he departed this life. So the world lost, in less than two years, Bergman and Scheele, of whom Sweden may justly boast; two philosophers, who were beloved and lamented by all their contemporaries, and whose memory posterity will never cease most gratefully to revere.

SCHEINER (Christopher), a German mathematician, astronomer, and Jesuit, eminent for being the first who discovered spots on the sun, was born at Schwaben in the territory of Middleheim in 1575. He first discovered spots on the sun's disk in 1611, and made observations on these phenomena at Rome, until at length reducing them to order, he published them in one vol. folio in 1630. He wrote also some smaller things relating to mathematics and philosophy; and died in 1690.

SCHELD, a river which rises on the confines of Picardy, and runs north-east by Cambray, Valenciennes, Tournay, Oudenarde, &c. and receiving the Lis at Ghent, runs east by Dendermoud, and then north to Antwerp: below which city it divides into two branches, one called *the Wester-Scheld*, which separates Flanders from Zealand, and discharges itself into the sea near Flushing; and the other called *the Ofter-Scheld*, which runs by Bergen-op-zoom, and afterwards between the islands Beveland and Schowen, and a little below falls into the sea.

SCHEMNITZ, a town of Upper Hungary, with three castles. It is famous for mines of silver and other

metals, as also for hot baths. Near it is a rock of a shining blue colour mixed with green, and some spots of yellow. E. Long. 19. 0. N. Lat. 48. 40.

SCHERARDIA, in botany; a genus of the monogynia order, belonging to the tetrandria class of plants. The corolla is monopetalous and funnel-shaped; there are two three-toothed seeds.

SCHETLAND. See SHETLAND.

SCHEUCHZERIA, in botany: A genus of the trigynia order, belonging to the hexandria class of plants; and in the natural method ranking under the fifth order, *Tripelatoidea*. The calyx is sexpartite; there is no corolla, nor are there any styles; there are three inflated and monospermous capsules.

SCHIECHS, or SCHECH, among the Arabs, is a name applied to their nobles. "Among the Bedouins," says Niebuhr, "it belongs to every noble, whether of the highest or the lowest order. Their nobles are very numerous, and compose in a manner the whole nation; the plebeians are invariably actuated and guided by the schiechs, who superintend and direct in every transaction. The schiechs, and their subjects, are born to the life of shepherds and soldiers. The greater tribes rear many camels, which they either sell to their neighbours, or employ them in the carriage of goods, or in military expeditions. The petty tribes keep flocks of sheep. Among those tribes which apply to agriculture, the schiechs live always in tents, and leave the culture of their grounds to their subjects, whose dwellings are wretched huts. Schiechs always ride on horses or dromedaries, inspecting the conduct of their subjects, visiting their friends, or hunting. Traversing the desert, where the horizon is wide as on the ocean, they perceive travellers at a distance. As travellers are seldom to be met with in those wild tracts, they easily discover such as pass that way, and are tempted to pillage them when they find their own party the strongest."

SCHINUS, in botany: A genus of the decandria order, belonging to the diœcia class of plants; and in the natural method ranking under the 43d order, *Dumose*. The male calyx is quinquefid; the petals five. The female flower is the same as in the male; the berry trilocular.

SCHIRAS, or SCHIRAUZ, a large and famous town of Persia, capital of Farfistan, is three miles in length from east to west, but not so much in breadth. It is seated at the north-west end of a spacious plain surrounded with very high hills, under one of which the town stands. The houses are built of bricks dried in the sun; the roofs are flat and terraced. There are 15 handsome mosques, tiled with stones of a bluish green colour, and lined within with black polished marble. There are many large and beautiful gardens, surrounded with walls fourteen feet high, and four thick. They contain various kinds of very fine trees, with fruits almost of every kind, besides various beautiful flowers. The wines of Schiras are not only the best in Persia, but, as some think, in the whole world. The women are much addicted to gallantry, and Schiras is called *an earthly paradise* by some. The ruins of the famous Persepolis are 30 miles to the north-east of this place. E. Long. 56. 0. N. Lat. 29. 36.

SCHISM, (from the Greek, *σχίσμα*, *clift*, *fissure*), in its general acceptation signifies *division* or *separation*; but is chiefly used in speaking of separations happening from

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Schistus from diversity of opinions among people of the same religion and faith.

Schænus. Thus we say the *schism* of the ten tribes of Judah and Benjamin, the *schism* of the Persians from the Turks and other Mahometans, &c.

Among ecclesiastical authors, the great schism of the West is that which happened in the times of Clement VII. and Urban VI. which divided the church for 40 or 50 years, and was at length ended by the election of Martin V. at the council of Constance.

The Romanists number 34 schisms in their church. — They bestow the name *English schism* on the reformation of religion in this kingdom. Those of the church of England apply the term *schism* to the separation of the nonconformists, viz. the presbyterians, independents, and anabaptists, for a further reformation.

SCHISTUS, in mineralogy, a name given to several different kinds of stones, but more especially to some of the argillaceous kind; as,

1. The bluish purple schistus, *schistus tegularis*, or common roof-slate. This is so soft that it may be slightly scraped with the nail, and is of a very brittle lamellated texture, of the specific gravity of 2,876. It is fusible *per se* in a strong heat, and runs into a black scoria. By a chemical analysis it is found to consist of 26 parts of argillaceous earth, 46 of siliceous earth, 8 of magnesia, 4 of calcareous earth, and 14 of iron. The dark-blue slate, or *schistus scriptorius*, contains more magnesia and less iron than the common purple schistus, and effervesces more briskly with acids. Its specific gravity is 2,701.

2. The pyritaceous schistus is of a grey colour, brown, blue, or black; and capable of more or less decomposition by exposure to the air, according to the quantity of pyritous matter it contains and the state of the iron in it. When this last is in a semi-phlogisticated state it is easily decomposed; but very slowly, or not at all, if the calx is much dephlogisticated. The aluminous schistus belongs to this species.

3. The bituminous schistus is generally black, and of a lamellated texture, of various degrees of hardness, not giving fire with steel, but emitting a strong smell when heated, and sometimes without being heated. M. Magellan mentions a specimen which burns like coal, with a strong smell of mineral bitumen, but of a yellowish brown, or rather dark ash-colour, found in Yorkshire. — This kind of schistus does not show any white mark when scratched like the other schistus.

SCHMIEDELIA, in botany: A genus of the digynia order, belonging to the octandria class of plants. The calyx is diphyllous; the corolla tetrapetalous; the germina pedicellated, and longer than the flower.

SCHOENOBATES (from the Greek, *σχολιός*, a rope; and *βαίω*, I walk), a name which the Greeks gave to their rope-dancers: by the Romans called *funambuli*. See ROPE-DANCER and FUNAMBULUS.

The *schænobates* were slaves whose masters made money of them, by entertaining the people with their feats of activity. *Mercurialis de arte gymnastica*, lib. III. gives us five figures of *schænobates* engraven after ancient stones.

SCHOENUS, in botany: A genus of the monogynia order, belonging to the triandria class of plants; and in the natural method ranking under the 3d order,

Calamaria. The glumes are paleaceous, univalved, and thickset; there is no corolla, and only one roundish seed between the glumes.

SCHOLASTIC, something belonging to the schools. See SCHOOL.

SCHOLASTIC Divinity, is that part or species of divinity which clears and discusses questions by reason and arguments; in which sense it stands, in some measure, opposed to *positive divinity*, which is founded on the authority of fathers, councils, &c. The school-divinity is now fallen into contempt; and is scarce regarded anywhere but in some of the universities, where they are still by their charters obliged to teach it.

SCHOLIAST, or COMMENTATOR, a grammarian who writes *scholia*, that is, notes, glosses, &c. upon ancient authors who have written in the learned languages. See the next article.

SCHOLIUM, a note, annotation, or remark, occasionally made on some passage, proposition, or the like. This term is much used in geometry and other parts of mathematics, where, after demonstrating a proposition, it is customary to point out how it might be done some other way, or to give some advice or precaution in order to prevent mistakes, or add some particular use or application thereof.

SCHOMBERG (Frederick-Armand duke of), a distinguished officer, sprung from an illustrious family in Germany, and the son of count Schomberg by an English lady, daughter of lord Dudley, was born in 1608. He was initiated into the military life under Frederick-Henry prince of Orange, and afterwards served under his son William II. of Orange, who highly esteemed him. He then repaired to the court of France, where his reputation was so well known, that he obtained the government of Gravelines, of Furnes, and the surrounding countries. He was reckoned inferior to no general in that kingdom except mareschal Turenne and the prince of Condé; men of such exalted eminence that it was no disgrace to acknowledge their superiority. The French court thinking it necessary to diminish the power of Spain, sent Schomberg to the assistance of the Portuguese, who were engaged in a war with that country respecting the succession to their throne. — Schomberg's military talents gave a turn to the war in favour of his allies. The court of Spain was obliged to solicit for peace in 1668, and to acknowledge the house of Braganza as the just heirs to the throne of Portugal. For his great services he was created count Mentola in Portugal; and a pension of 5000 l. was bestowed upon him, with the reversion to his heirs.

In 1673 he came over to England to command the army; but the English at that time being disgusted with the French nation, Schomberg was suspected of coming over with a design to corrupt the army, and bring it under French discipline. He therefore found it necessary to return to France, which he soon left, and went to the Netherlands. In the month of June 1676, he forced the prince of Orange to raise the siege of Maestricht; and it is said he was then raised to the rank of mareschal of France. But the French *Dictionnaire Historique*, whose information on a point of this nature ought to be authentic, says, that he was invested with this honour the same year in which he took the fortresses

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fortress of Bellegarde from the Spaniards while serving in Portugal.

Upon the revocation of the edict of Nantes, when the persecution commenced against the Protestants, Schomberg, who was of that persuasion, requested leave to retire into his own country. This request was refused; but he was permitted to take refuge in Portugal, where he had reason to expect he would be kindly received on account of past services. But the religious zeal of the Portuguese, though it did not prevent them from accepting assistance from a heretic when their kingdom was threatened with subversion, could not permit them to give him shelter when he came for protection. The inquisition interfered, and obliged the king to send him away. He then went to Holland by the way of England. Having accepted an invitation from the elector of Brandenburg, he was invested with the government of Ducal Prussia, and appointed commander in chief of the elector's forces. When the prince of Orange sailed to England to take possession of the crown which his father-in-law James II. had abdicated, Schomberg obtained permission from the elector of Brandenburg to accompany him. He is supposed to have been the author of an ingenious stratagem which the prince employed after his arrival in London to discover the sentiments of the people respecting the revolution. The stratagem was, to spread an alarm over the country that the Irish were approaching with fire and sword. When the prince was established on the throne of England, Schomberg was appointed commander in chief of the forces and master of the ordnance. In April 1689 he was made knight of the garter, and naturalized by act of Parliament; and in May following was created a baron, earl, marquis, and duke of the kingdom of England, by the name and title of baron Teys, earl of Brentford, marquis of Harwich, and duke of Schomberg. The House of Commons voted to him L. 100,000 as a reward for his services. Of this he only received a small part; but after his death a pension of L. 5000 a-year was bestowed upon his son.

In August 1689 he was sent to Ireland to reduce that kingdom to obedience. When he arrived, he found himself at the head of an army consisting only of 12,000 foot and 2000 horse, while king James commanded an army three times more numerous. Schomberg thought it dangerous to engage with so superior a force, and being disappointed in his promised supplies from England, judged it prudent to remain on the defensive. He therefore posted himself at Dundalk, about five or six miles distance from James, who was encamped at Ardee. For six weeks he remained in this position, without attempting to give battle, while from the wetness of the season he lost nearly the half of his army. Schomberg was much blamed for not coming to action; but some excellent judges admired his conduct as a display of great military talents. Had he risked an engagement, and been defeated, Ireland would have been lost. At the famous battle of the Boyne, fought on the 1st July 1690, which decided the fate of James, Schomberg passed the river at the head of his cavalry, defeated eight squadrons of the enemy, and broke the Irish infantry. When the French Protestants lost their commander, Schomberg went to rally and lead them on to charge. While thus engaged, a party of king James's guards, which had been separated from the rest, passed Schom-

berg, in attempting to rejoin their own army. They attacked him with great fury, and gave him two wounds in the head. As the wounds were not dangerous, he might soon have recovered from them; but the French Protestants, perhaps thinking their general was killed, immediately fired upon the guards, and shot him dead on the spot. He was buried in St Patrick's cathedral.

Bishop Burnet says, Schomberg was "a calm man, of great application and conduct, and thought much better than he spoke; of true judgment, of exact probity, and of a humble and obliging temper."

SCHOOL, a public place, wherein the languages, the arts, or sciences, are taught. Thus we say, a grammar school, a writing school, a school of natural philosophy, &c.—The word is formed from the Latin *schola*, which, according to Du Cange, signifies discipline and correction; he adds, that it was anciently used, in general, for all places where several persons met together, either to study, to converse, or do any other matter. Accordingly, there were *schola palatina*, being the several posts wherein the emperor's guards were placed; *schola scutariorum*, *schola gentilium*, &c. At length the term passed also to civil magistrates; and accordingly in the code we meet with *schola chartulariorum*, *schola agentium*, &c.; and even to ecclesiastics, as *schola cantorum*, *schola sacerdotum*, &c.

The Hebrews were always very diligent to teach and study the laws that they had received from Moses. The father of the family studied and taught them in his own family. The Rabbins taught them in the temple, in the synagogues, and in the academies. They pretend, that even before the deluge there were schools for knowledge and piety, of which the patriarchs had the direction.—They place Adam at their head, then Enoch, and lastly Noah. Melchisedec, as they say, kept a school in the city of Kajrath-sepher, otherwise Hebron, in Palestine. Abraham, who had been instructed by Heber, taught in Chaldaea and in Egypt. From him the Egyptians learned astronomy and arithmetic. Jacob succeeded Abraham in the office of teaching. The scripture says, he was "a plain man dwelling in tents;" which, according to the Chaldee paraphrast, is, "that he was a perfect man, and a minister of the house of doctrine."

All this, indeed, must be very precarious and uncertain. It cannot be doubted but that Moses, Aaron, and the elders of Israel, instructed the people in the wilderness, and that many good Israelites were very industrious to instruct their families in the fear of God. But all this does not prove to us that there were any such schools as we are now inquiring after. Under Joshua we see a kind of academy of the prophets, where the children of the prophets, that is, their disciples, lived in the exercise of a retired and austere life, in study, in the meditation and reading of the law of God. There were schools of the prophets at Naioth in Ramah; 1 Sam. xix. 12, 20, &c. See the article PROPHET.

These schools, or societies of the prophets, were succeeded by the synagogues. See the article SYNAGOGUE.

Charity-SCHOOLS are those schools which are set apart by public contributions or private donations for the instruction of poor children, who could not otherwise enjoy the benefits of education. In no country are these

School.

School
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Schorl.

these more numerous than in Great Britain, where charity and benevolence are characteristic of the nation at large. The following is a summary view of the number of charity-schools in Great Britain and Ireland, according to the best information at present, 1795.

	Schools.	Boys.	Girls.
At London	182	4442	2870
In other parts of South Britain,	1329	19506	3915
In North Britain, by the account published in 1786,	135	5187	2618
In Ireland, for teaching to read and write only,	168	2406	600
In ditto, erected pursuant to his majesty's charter, and encouraged by his bounty of L. 1000 <i>per annum</i> , for instructing, employing, and wholly maintaining the children, exclusive of the Dublin work-house school,	42	1935	—
Total of schools, &c.	1856	33476	10003

Sunday-Schools are another species of charity-schools lately instituted, and now pretty common in Great Britain. The institution is evidently of the first importance; and if properly encouraged must have a very favourable effect on the morals of the people, as it tends not only to preserve the children of the poor from spending Sunday in idleness, and of consequence in dissipation and vice, but enables them to lay in for the conduct and comfort of their future life a stock of useful knowledge and virtuous principles, which, if neglected in early life, will seldom be fought for or obtained amidst the hurry of business and the cares and temptations of the world.

The excellent founder of Sunday-schools was Mr Raikes, a gentleman of Gloucestershire, who, together with Mr Stock, a clergyman in the same county, and who, we believe, was equally instrumental in the business with Mr Raikes, shewed the example, and convinced many of the utility of the plan. From Gloucestershire the institution was quickly adopted in every county, and almost every town and parish of the kingdom; and we have only further to remark on a plan so generally known, so much approved, and so evidently proper, that we hope men of eminence and weight will always be found sufficiently numerous and willing to bestow their time and countenance in promoting it to the utmost of their power.

SCHOONER, in sea-language, a small vessel with two masts, whose main-sail and fore-sail are suspended from gaffs, reaching from the mast towards the stern, and stretched out below by booms, whose foremost ends are hooked to an iron, which clasps the mast so as to turn therein as upon an axis, when the after-ends are swung from one side of the vessel to the other.

SCHORL, a precious stone of the second order, of which the varieties are, *Siberian*, ruby-coloured, reddish, green, brown, blue, and black; *mother of emerald*, dark green; *lapis crucifer*, or the *cross stone*; *bar schorl*; *horn blend*, black, green, or blue; *Cianite*, blue schorl; *Thumstein*; *Laxman's quadrangular schorl*.

Schorl.

Transparent schorl is chrystallized in polygonal prisms, generally with four, six, or nine sides; some of them are so fine as to pass for gems of the first order, especially for the emerald. In the semitransparent schorls there are likewise some of great beauty, as the ruby-coloured, lately discovered in Siberia by counsellor Herman, in a bed of reddish argilla, mixed with fragments of felt spath, quartz, and mica, on a low granite mountain. The bed of argilla is evidently produced by the decomposition of granite; which operation Herman supposes must have set at liberty the ruby schorl formerly pent up in the chinks or fissures of the decomposed part of the mountain. The discovery is quite new, no such species being before known, as it is as hard as the first order of precious stones, the diamond excepted, takes a fine polish, and equals in colour the oriental ruby, though not in transparency.

Its structure is made up of fine cylindric columns, like needles collected into bundles or tresses, lying one on another in different directions, whilst each individual column is made up of fine plates or laminæ, like the gems. It is fusible *per se* into a white transparent glass, and melts imperfectly with borax when calcined, as it does with microcosmic salt and mineral alkali, into a small vitreous globe, with little spots of a white enamel colour. Acids have no effect upon it, even when calcined. Lastly, it loses its colour in the fire, after having first turned blue. The mother of emeralds is likewise a semitransparent schorl, in the opinion of some able naturalists, although Mr Born asserts it to be a jade, we know not upon what authority.

The structure of the semitransparent schorls, and some of the transparent that are not so perfectly diaphanous as to conceal their texture, is obscurely sparry; but that of the opaque is either filamentous, like asbestos, or hard and brittle like threads of glass, or it is composed of scales. Of this last kind is that called *horn blend*, which is generally green or black; but there is a beautiful variety of it found on the mount St Gothard, in Switzerland, of a fine sky-blue colour covered with silver talk. Bar schorl has been found on the Carpathian mountains chrystallized in prisms. *Lapis crucifer*, or the *cross stone*, is found sometimes near Brazil in Switzerland, and there named *Taufstein*, or christening stone; but oftener at Thum in Saxony, and therefore named there *Thumstein*. It is a schorl in form of a cross: that of Brazil consists of two hexagonal chrystals. The exact crystallization of the other is unknown to us.

Most countries produce schorls. Russia is particularly rich in schorls. It is even difficult to point out all the different places of the empire which produce them; but we shall take notice of those most remarkable, particularly new discoveries. The ruby-coloured schorl mentioned above was found by Mr Herman at Sarapoulsky, a village in the government of Perm, ten versts from Mourfinsky Slabode, in Siberia. The Siberian inspector, Mr Laxman, has lately discovered in the mountain Alpestria, on the river Sleudenka near the lake Baikal, the following new schorls. First, a green transparent schorl, of so brittle a nature as not to bear carriage without breaking into small pieces truncated. Pallas is positive in declaring this dark green schorl a hyacinth. This last has often some of the small yellowish white garnets sticking in it, described in the article

Schotia
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Schurman.

de GARNET, where an account will be found of the species of matrix that contains them all. Schorls are likewise found in the mountains and mines of Nifelga, Krasnavolok, and Sondala, as likewise between the Onega Lake and White Sea. Black schorl is likewise found near the White Sea, and in the Altai, Ural, and Daurian mountains.

None of the transparent schorls have been found in Scotland as far as we have heard; but many varieties of the opaque kinds have been found in various places, particularly in the island of Arran, where there is a bed of greenish horn-like schorl of immense extent near the harbour of Lamlash.

Fine specimens of schorl are dear; the ruby schorl from Siberia, 25 to 50 rubles a ring stone; the green, when fine, from 15 to 30. The high price of the ruby schorl is owing to its novelty and rarity; and of the green, is owing to its passing for an emerald. The specific gravity of schorl is 3.6.

SCHOTIA, in botany: A genus of the monogynia order, belonging to the decandria class of plants; and in the natural method ranking under the 33d order, *Lomentaceae*. The calyx is semiquinquefid; the corolla has five petals, which are equal; the tube is turbinated, carnosous, and persistent. The legumen pedicellated, and contains two seeds; there is only one species, viz. the speciosa, or African *lignum vitae*.

SCHREBERA, in botany: A genus of the digynia order, belonging to the pentandria class of plants; and in the natural method ranking with those of which the order is doubtful. The calyx is quinquepartite; the corolla funnel-shaped, with the filaments in the throat, and having each a scale at the base.

SCHREVELIUS (Cornelius), a laborious Dutch critic and writer, who has given the public some editions of the ancient authors more elegant than correct: his Greek Lexicon is esteemed the best of all his works. He died in 1667.

SCHULTENS (Albert), professor of Hebrew and of the eastern languages at Leyden, and one of the most learned men of the 18th century, was born at Groningen, where he studied till the year 1706, and from thence continued his studies at Leyden and Utrecht. Schultens at length applied himself to the study of Arabic books, both printed and in manuscript; in which he made great progress. A short time after he became minister of Wassenar, and two years after professor of the eastern tongues at Franeker. At length he was invited to Leyden, where he taught Hebrew and the eastern languages with extraordinary reputation till his death, which happened in 1750. He wrote many learned works; the principal of which are, 1. A Commentary on Job, 2 vols 4to. 2. A Commentary on the Proverbs. 3. *Vetus & regia via Hebraizandi*. 4. *Animadversiones philologicae & criticae ad varia loca Veteris Testamenti*. 6. An excellent Hebrew grammar, &c. Schultens discovered in all his works sound criticism and much learning. He maintained against Goussset and Driessen, that in order to have a perfect knowledge of Hebrew, it is necessary to join with it, not only the Chaldee and Syriac, but more particularly the Arabic.

SCHURMAN (Anna Maria), a most extraordinary German lady. Her natural genius discovered itself at six years of age, when she cut all sorts of figures in

paper with her scissors without a pattern. At eight, she learned, in a few days, to draw flowers in a very agreeable manner. At ten, she took but three hours to learn embroidery. Afterwards she was taught music, vocal and instrumental; painting, sculpture, and engraving; in all of which she succeeded admirably. She excelled in miniature-painting, and in cutting portraits upon glass with a diamond. Hebrew, Greek, and Latin, were so familiar to her, that the most learned men were astonished at it. She spoke French, Italian, and English, fluently. Her hand-writing, in almost all languages, was so inimitable, that the curious preserved specimens of it in their cabinets. But all this extent of learning and uncommon penetration could not protect her from falling into the errors of Labadie, the famous French enthusiast, who had been banished France for his extravagant tenets and conduct. To this man she entirely attached herself, and accompanied him wherever he went; and even attended him in his last illness at Altena in Holstein. Her works, consisting of *De vite humana termino*, and *Dissertatio de ingenii muliebris ad doctrinam et meliores literas aptitudine*, and her Letters to her learned correspondents, were printed at Leyden in 1648; but enlarged in the edition of Utrecht, 1662, in 12mo, under the following title: *A. M. Schurman Opuscula Hebraea, Graeca, Latina, Gallica, Prosaica, et Metrica*. She published likewise at Altena, in Latin, A Defence of her attachment to Labadie, while she was with him in 1673; not worth reading. She was born at Cologne in 1607, but resided chiefly in Holland, and died in Friesland in 1678.

SCHALBEA, in botany; a genus of the angiospermia order, belonging to the didynamia class of plants. The calyx is quadrifid, with a superior lobe; the lowermost longest, and emarginated.

SCHWARTS (Christopher), an eminent history-painter, born at Ingolstadt in 1550, who was distinguished by the appellation of the *German Raphael*. He learned the first principles of the art in his own country, but finished his studies at Venice; when he not only made the works of Titian his models, but had the advantage of receiving some personal instructions from that illustrious master. His performances were soon in the highest esteem, as his manner of painting was very different from what the Germans had been accustomed to before that time: he was, therefore, invited by the elector of Bavaria to his court, and appointed his principal painter. He died in 1594; and his most capital works, as well in fresco as in oil, are in the palace at Munich, and in the churches and convents.

SCHWARTENBURG, a town and castle of Germany, and circle of Upper Saxony, in the landgravate of Thuringia, and capital of a county of the same name belonging to a prince of the house of Saxony. It is seated on the river Schwartz, 20 miles south-east of Erford, and 35 north of Cullembach. E. Long. 11. 27. N. Lat. 50. 45.

SCHWARTZEMBERG, a town of Germany, in the circle of Franconia, and capital of a principality of the same name. The castle is seated on the river Lec, 5 miles north-west of Nuremberg, and 20 east of Wertzburg, subject to its own prince. E. Long. 10. 27. N. Lat. 49. 43.

SCHWEI-

Schurman
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Schwart-
zenberg.

Schweid-
nitz
||
Sciacca.

SCHWEIDNITZ, a strong town of Germany, in Silesia, and capital of a province of the same name, with a castle. It is the handsomest town of Silesia, next to Breslaw. The streets are large, the church fine, and the houses well built. The fortifications are not very considerable, and the royal palace is turned into a convent. All the magistrates are Roman Catholics; but most of the inhabitants are Protestants, who have a church without the town, as also a public school and bells. It is seated on an eminence on the river Weistritz, 27 miles south-east of Lignitz, and 22 south-west of Breslaw. E. Long. 16. 48. N. Lat. 50. 46.

SCHWEINFURT, a very strong, free, and imperial town of Germany, in Franconia, with a magnificent palace, where the senators meet, who are 12 in number. The environs are rich in cattle, corn, and wine; the inhabitants are Protestants, and not very rich. However, they carry on a large trade in woolen and linen cloth, goose-quills, and feathers. It is seated on the river Main, 27 miles north-east of Wirtzburg, and 22 west of Bamberg. E. Long. 10. 25. N. Lat. 50. 4.

SCHWENKFELDIA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants; and in the natural method ranking with those that are doubtful. The calyx is quinquefid; the corolla funnel-shaped; the stigma parted into five; the berry quinquelocular, with a number of seeds. Of this there are three species, viz. 1. Cinerea; 2. Aspera; 3. Hirta. The two first are natives of Guiana, the other of Jamaica. The leaves of all of them are remarkably rough, and stick to the fingers or clothes.

SCHWENKIA, in botany; a genus of the monogynia order, belonging to the diandria class of plants. The corolla is almost equal, plaited at the throat, and glandulous; there are three barren stamina; the capsule bilocular and polyspermous.

SCHWINBURG, a town of Denmark, on the eastern coast of the island of Fionia, over-against the islands of Arroa and Langeland. E. Long. 10. 55. N. Lat. 55. 8.

SCHWITZ, or **SWITZ**, a canton of Swisserland, which gives name to them all. It is bounded on the west by the lake of the four cantons, on the south by the canton of Uri, on the east by that of Glaris, and on the north by those of Zurich and Zug. Its principal riches consist in cattle, and the capital town is of the same name. This is a large, handsome place, seated near the lake of the four cantons, in a pleasant country among the mountains. E. Long. 8. 41. N. Lat. 47. 2.

SCIACCA, anciently called *Therma Selinuntia*, in Sicily, derives its present denomination from the Arabic word *Scheich*. It is a very ancient place, being mentioned in the account of the wars between the Greeks and Carthaginians, to the latter of whom it belonged. It is defended by ancient walls and the castle of Luna. It stands upon a very steep rock, hanging over the sea, and excavated in every direction into prodigious magazines, where the corn of the neighbouring territory is deposited for exportation; there is no harbour, but a small bay formed by a wooden pier, where lighters lie to load the corn which they carry out about a mile to ships to anchor.

The town is irregularly but substantially built, and

contains 13,000 inhabitants, though Amico's *Lexicon Topographicum* says the last enumeration found only 9484. His accounts do not take in ecclesiastics, and several denominations of lay persons.

SCIÆNA, in ichthyology, a genus belonging to the order of thoracici. The membrane of the gills has six rays; the opercula and whole head are scaly. There are five species.

SCIATICA, the **HIP-GOUT**. See **MEDICINE**, n° 207.

SCIENCE, in philosophy, denotes any doctrines deduced from self-evident principles.

Sciences may be properly divided as follows, 1. The knowledge of things, their constitutions, properties, and operations: this, in a little more enlarged sense of the word, may be called *φυσικη*, or *natural philosophy*; the end of which is speculative truth. See **PHILOSOPHY** and **PHYSICS**.—2. The skill of rightly applying these powers, *πρακτικη*: The most considerable under this head is ethics, which is the seeking out those rules and measures of human actions that lead to happiness, and the means to practise them (see **MORAL PHILOSOPHY**); and the next is mechanics, or the application of the powers of natural agents to the uses of life (see **MECHANICS**).—3. The doctrine of signs, *σημειωτικη*; the most usual of which being words, it is aptly enough termed *logic*. See **LOGIC**.

This, says Mr Locke, seems to be the most general, as well as natural, division of the objects of our understanding. For a man can employ his thoughts about nothing but either the contemplation of things themselves for the discovery of truth; or about the things in his own power, which are his actions, for the attainment of his own ends; or the signs the mind makes use of both in the one and the other, and the right ordering of them for its clearer information. All which three, viz. things as they are in themselves knowable, actions as they depend on us in order to happiness, and the right use of signs in order to knowledge, being *toto calo* different, they seem to be the three great provinces of the intellectual world, wholly separate and distinct one from another.

SCILLA, the **SQUILL**, in botany: A genus of the monogynia order, belonging to the hexandria class of plants; and in the natural method ranking under the 10th order, *Coronarie*. The corolla is hexapetalous and deciduous; the filaments filiform.

The most remarkable species is the *maritima*, or sea-onion, whose roots are used in medicine. Of this there are two sorts, one with a red, and the other with a white root; which are supposed to be accidental varieties, but the white are generally preferred for medicinal use. The roots are large, somewhat oval-shaped, composed of many coats lying over each other like onions; and at the bottom come out several fibres. From the middle of the root arise several shining leaves, which continue green all the winter, and decay in the spring. Then the flower-stalk comes out, which rises two feet high, and is naked half-way, terminating in a pyramidal thyse of flowers, which are white, composed of six petals, which spread open like the points of a star. This grows naturally on the sea-shores, and in the ditches, where the salt-water naturally flows with the tide, in most of the warm parts of Europe, so cannot be propagated in gardens; the frost in winter al-

Sciæna
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Scilla.

Scilly.

ways destroying the roots, and for want of salt-water they do not thrive in summer. Sometimes the roots which are bought for use put forth their stems and produce flowers, as they lie in the druggists shops.— This root is very nauseous to the taste, intensely bitter, and so acrimonious, that it ulcerates the skin if much handled. Taken internally, it powerfully stimulates the solids, and promotes urine, sweat, and expectoration. If the dose is considerable, it proves emetic, and sometimes purgative. The principal use of this medicine is where the primæ viæ abound with mucous matter, and the lungs are oppressed by tenacious phlegm. It has been recommended in hydropic cases, taken in powder, from four to ten grains in a dose, mixed with a double quantity of nitre. The most commodious mode of exhibiting this root is as a bolus or pill. Liquid forms are too disagreeable to most people; though this may be remedied in some degree by the addition of some aromatic distilled waters. It yields the whole of its virtues to aqueous and vinous menstrua, and likewise to vegetable acids.

SCILLY, or SILLEY, a cluster of small islands and rocks, situated in the Atlantic Ocean, in W. Long. 7°. N. Lat. 50°.

These islands were first called *Cassiterides*, or the *Tin Isles*, from their being rich in that metal. The common opinion is, that this is a Greek appellation; which in the most obvious sense is true: But as the Phœnicians were familiar with the metal, and with the country that produced it, before the Greeks knew any thing of either, it is very likely they introduced the names of both from their own language. Strabo says these islands were ten in number, lying close together, of which only one was uninhabited: the people led an erratic life, lived upon the produce of their cattle, wore an under-garment which reached down to their ankles, and over that another, both of the same colour, which was black, girt round a little below the breast with a girdle, and walked with staves in their hands. The riches of these islands were tin and lead, which, with the skins of their cattle, they exchanged with foreign merchants, that is, the Phœnicians from Cadiz, for earthen-ware, salt, and utensils made of brass. An author of as great or greater antiquity, seems to include a part at least of Cornwall amongst these islands; or rather he suggests, that they were not perfect islands except at full sea, but that at ebb the inhabitants passed from one to another upon the sands, and that they even transported their tin in large square blocks upon carriages from one island to another. He farther takes notice, that such as inhabited about Belerium (the Land's End) were in their conversation with strangers remarkably civil and courteous. Other ancient writers style these islands *Hesperides*, from their western situation, and *Oestrymnides*, asserting that the land was extremely fertile, as well as full of mines; and that the people, though very brave, were entirely addicted to commerce, and boldly passed the seas in their leather boats.

The Romans were exceedingly desirous of having a share in this commerce, which the Phœnicians as carefully laboured to prevent, by concealing their navigation to these islands as much as it was in their power. At length, however, the Romans prevailed; and Publius Crassus coming thither, was so well pleased with the

industry and manners of the people, that he taught them various improvements, as well in working their mines, which till that time were but shallow, as in carrying their own merchandise to different markets. There is no room to doubt that they followed the fate of the rest of Britain, and particularly of Cornwall, in becoming subject to the Roman empire. We find them called in the Itinerary of Antoninus, *Sigdeles*; by Sulpitius, *Sillena*; and by Solinus they are termed *Silures*. All we know of them during this period is, that their tin trade continued, and that sometimes state-prisoners were exiled, or, to use the Roman phrase, relegated hither as well as to other islands.

When the legions were withdrawn, and Britain with its dependencies left in the power of the natives, there is no reason to question that these islands shared the same lot with the rest. As to the appellation which from this period prevailed, the ordinary way of writing it is *Scilly*; in records we commonly find it spelt *Silly*, *Silley*, or *Sulley*; but we are told the old British appellation was *Sulleb*, or *Sylleb*, which signifies rocks consecrated to the sun. We have not the least notice of any thing that regards them from the fifth to the tenth century. It is, however, with much appearance of truth conjectured, that some time within this space they were in a great measure destroyed by an earthquake, attended with a sinking of the earth, by which most of their lowlands, and of course the greatest part of their improvements, were covered by the sea, and those rich mines of tin which had rendered them so famous swallowed up in the deep. They have a tradition in Cornwall, that a very extensive tract of country called the *Lionesse*, in the old Cornish *Letthausow*, supposed to lie between that country and Scilly, was lost in that manner; and there are many concurrent circumstances which render this probable. In reference to these islands, the case is still stronger; for at low ebbs their stone-inclosures are still visible from almost all the isles, and thereby afford an ocular demonstration that they were formerly of far greater extent, and that in remoter ages their inhabitants must have been very numerous, and at the same time very industrious. This sufficiently proves the fact, that by such an earthquake they were destroyed; and that it happened at some period of time within those limits that have been assigned, appears from our hearing nothing more of their tin trade, and from our having no notice of it at all in any of our ancient chronicles, which, if it had fallen out later, from their known attention to extraordinary events, must certainly have happened.

It is generally supposed, and with great appearance of truth, that king Athelstan, after having overcome a very powerful confederacy formed against him, and having reduced Exeter, and driven the Britons beyond the river Tamar, which he made the boundary of their Cornish dominions, passed over into these islands, (then surely in a better state than now, or they would not have been objects of his vengeance), and reduced them likewise. History does not inform us, that the Danes ever fixed themselves in these islands; but as their method of fortifying is very well known, it has been conjectured that the Giant's Castle in the isle of St Mary was erected by them; and indeed, if we consider the convenient situation of these islands, and the

Scilly.

Scilly.

trade of piracy which that nation carried on, there seems to be nothing improbable in that conjecture. It is more certain that there were churches erected in these isles, and that there were in them also many monks and hermits, before the conquest.

The fertility of the islands is much insisted upon in all the accounts; and it is expressly said of St Mary's, that it bears exceeding good corn, insomuch that if men did but cast corn where swine had rooted, it would come up. There is mention made of a breed of wild swine, and the inhabitants had great plenty of fowl and fish. But notwithstanding the fertility of the country, and the many commodities that men had or might have there, it was nevertheless but thinly peopled; and the reason assigned is, because they were liable to be frequently spoiled by French or Spanish pirates. In Leland's time, one Mr Davers of Wiltshire, and Mr Whittington of Gloucestershire, were proprietors of Scilly, and drew from thence, in rents and commodities, about 40 merks a-year.

The inhabitants at that juncture, and long before, appear to have carried on a small trade in dried skate and other fish to Bretagne, with which they purchased salt, canvas, and other necessities. This seems to be the remains of a very old kind of commerce, since, for many ages, the people of that country, those of the Scilly isles, and the people of Cornwall, looked upon themselves as countrymen, being in truth no other than remnants of the ancient Britons, who, when driven out by the Saxons, took refuge in those islands, and in that part of France which had before been called *Armorica*, and from hence styled *Bretagne*, *Brittany*, or *Little Britain*, and the people *Bretons*. This, in all probability, was a great relief to those who dwelt in those isles; who, during the long civil war between the houses of York and Lancaster, had their intercourse with England so much interrupted, that if it had not been for this commerce with their neighbours on the French coast, they might have been driven to the last distress.

The Scilly, or Silley islands, lie due west from the Lizard about 17 leagues; west and by south from the old Land's End, next Mount's Bay, at the distance of 10 leagues; and from the western Land's End, they lie west-south-west, at the distance of something more than nine leagues. There are five of them inhabited; and that called *Sanfon* has one family in it. The largest of these is St Mary's, which lies in the north latitude of 49 degrees 55 minutes, and in the longitude of 6 degrees 40 minutes west from Greenwich. It is two miles and a half in length, about one and a half in breadth, and between nine and ten miles in compass. On the west side there projects an isthmus. Beyond this there is a peninsula, which is very high; and upon which stands Star Castle, built in 1593, with some outworks and batteries. On these there are upwards of threescore pieces of cannon mounted; and for the defence of which there is a garrison of an entire company, with a master-gunner and six other gunners. In the magazine there are arms for 300 islanders, who, when summoned, are bound to march into the fortress. Underneath the castle barracks and lines stands Hugh Town, very improperly built, as lying so low as to be subject to inundations. A mile within land stands Church Town, so denominated from their place of wor-

Scilly.

ship; it consists of a few houses only, with a court-house. About two furlongs east of this lies the Old Town, where there are more houses, and some of them very convenient dwellings. The number of inhabitants in this island is about 600 or 700; and it produces to the lord proprietor 300*l.* *per annum*.

Trescow lies directly north from St Mary's, at the distance of two miles. It was formerly styled *St Nicholas's island*; and was at least as large as St Mary's, though at present about half the size. The remains of the abbey are yet visible, the situation well chosen, with a fine basin of fresh water before it, half a mile long and a furlong wide, with an ever-green bank high enough to keep out the sea, and serving at once to preserve the pond, and shelter the abbey. In this pond there are most excellent eels, and the lands lying round it are by far the best in those islands. There are about half a score stone houses, with a church, which are called *Dolphin Town*; an old castle built in the reign of Henry VIII. called *Oliver's Castle*; and a new block-house, raised out of the ruins of that castle, which is of far greater use. This island is particularly noted for producing plenty of the finest samphire, and the only tin works that are now visible are found here. There are upon it at present about 40 families, who are very industrious, and spin more wool than in St Mary's. Its annual value is computed at 80*l.* a-year.

A mile to the east of Trescow, and about two miles from the most northern part of St Mary's, lies the isle of *St Martin's*, not much inferior in size to that of Trescow. It very plainly appears to have been formerly extremely well cultivated; notwithstanding which it was entirely deserted, till within somewhat less than a century ago, that Mr Thomas Ekines, a considerable merchant, engaged some people to settle there. He likewise caused to be erected a hollow tower twenty feet in height, with a spire of as many feet more; which being neatly covered with lime, serves as a day-mark for directing ships crossing the channel or coming into Scilly. St Martin's produces some corn, affords the best pasture in these islands, nourishes a great number of sheep, and has upon it 17 families, who pretend to have the secret of burning the best kelp, and are extremely attached to their own island. As a proof of this, it is observable, that though some of the inhabitants rent lands in St Mary's, yet they continue to reside here, going thither only occasionally.

St Agnes, which is also called the *Light-house Island*, lies near three miles south-west of St Mary's; and is, though a very little, a very well cultivated island, fruitful in corn and grass. The only inconvenience to which the people who live in it are subject, is the want of good water, as their capital advantage consists in having several good coves or small ports, where boats may lie with safety; which, however, are not much used. The light-house is the principal ornament and great support of the island, which stands on the most elevated ground, built with stone from the foundation to the lantern, which is fifty-one feet high, the gallery four, the sash-lights eleven feet and a half high, three feet two inches wide, and sixteen in number. The floor of the lantern is of brick, upon which stands a substantial iron grate, square, barred on every side, with one great chimney in the canopy-roof, and several lesser ones to let out the smoke, and a large pair of smith's bellows

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are so fixed as to be easily used whenever there is occasion. Upon the whole, it is a noble and commodious structure; and being plastered white, is a useful day-mark to all ships coming from the southward. The keeper of this light-house has a salary from the Trinity-house at Deptford of 40 l. a-year, with a dwelling-house and ground for a garden. His assistant has 20 l. a-year. It is supplied with coals by an annual ship; and the carriage of these coals from the sea-side to the light-house is looked on as a considerable benefit to the poor inhabitants. They have a neat little church, built by the Godolphin family. There are at present 50 households in the island, which yield the proprietor 40 l. a-year.

Brebar, or, as pronounced, *Bryer island*, lies north-west of St Mary's, and to the west of Trefscaw, to which, when the sea is very low, they sometimes pass over the sand. It is very mountainous, abounds with sea and land fowls, excellent samphire, and a great variety of medical herbs. There are at present thirteen families, who have a pretty church, and pay 30 l. a-year to the proprietor.

South from hence, and west from Trefscaw, stands the island of *Samson*, in which there is not above one family, who subsist chiefly by the making of kelp. To the westward of these there lie four islands, which contain in the whole 360 acres of meadow and arable land. The *eastern isles*, so denominated from their position in respect to St Mary's, contain 123 acres; and there are also seven other rocky and scattered islands, that have each a little land of some use; and besides these, innumerable rocks on every side, among which we must reckon *Scilly*, now nothing more than a large, ill-shaped, craggy, inaccessible island, lying the farthest north-west of any of them, and consequently the nearest to the continent.

The air of these islands is equally mild and pure; their winters are seldom subject to frost or snow. When the former happens, it lasts not long; and the latter never lies upon the ground. The heat of their summers is much abated by sea-breezes. They are indeed frequently incommoded by sea fogs, but these are not unwholesome. Agues are rare, and fevers more so. The most fatal distemper is the small-pox; yet those who live temperately survive commonly to a great age, and are remarkably free from diseases. The soil is very good, and produces grain of all sorts (except wheat, of which they had anciently plenty) in large quantities. They still grow a little wheat, but the bread made of it is unpleasant. They eat, for this reason, chiefly what is made of barley; and of this they have such abundance, that though they use it both for bread and beer, they have more than suffices for their own consumption. The use of potatoes is a new improvement; and they prosper to such a degree, that in some places there are two crops in a-year. Roots of all sorts, pulse, and salads, grow well; dwarf fruit-trees, gooseberries, currants, raspberries, and every thing of that kind, under proper shelter, thrive exceedingly; but they have no trees, though formerly they had elder; and porthelik, *i. e.* the harbour of willows, proves they had these likewise; and with a little care, no doubt, great improvements might be made. The ranunculus, anemone, and most kinds of flowers, are successfully cultivated in their gardens. They have wild fowl of all

sorts, from the swan to the snipe; and a particular kind called the *bedge-chicken*, which is not inferior to the ortolan; also tame fowl, puffins, and rabbits, in great numbers. Their black cattle are generally small, but very well tasted, though they feed upon ore-weed. Their horses are little, but strong and lively. They have also large flocks of fine sheep, whose fleeces are tolerably good and their flesh excellent. There are no venomous creatures in these islands.

We must now pass to the sea, which is of more consequence to these isles than that small portion of land which is distributed amongst them. St Mary's harbour is very safe and capacious, having that island on the south; the eastern islands, with that of St Martin, on the east; Trefscaw, Brehar, and Samson, to the north; St Agnes and several small islands to the west. Ships ride here in three to five fathom water, with good anchorage. Into this harbour there are four inlets, viz. Broad Sound, Smith's Sound, St Mary's Sound, and Crow Sound: so that hardly any wind can blow with which a ship of 150 tons cannot safely sail through one or other of them, Crow Sound only excepted, where they cannot pass at low water, but at high there is from 16 to 24 feet in this passage. Besides these there are two other harbours; one called *New Grynsey*, which lies between Brehar and Trefscaw, where ships of 300 tons may ride securely. The other is called *Old Grynsey*, and lies between Trefscaw, St Helen's, and Theon, for smaller ships. The former is guarded by the batteries at Oliver's Castle; the latter by the Blockhouse, on the eastern side of Trefscaw, called *Dover*. Small coasters bound to the northward have more convenient outlets from these little harbours than from St Mary's, where, at the west end of Hugh Town, there is a fine pier built by the present earl of Godolphin, 430 feet long, 20 feet wide in the narrowest part, and 23 feet in height, with 16 feet of water at a spring, and 10 at a neap tide; so that under the shelter of this pier, vessels of 150 tons may lie securely, not only close to the quay, but all along the strand of the town.

In this harbour, and in all the little coves of the several isles, prodigious quantities of mackerel may be caught in their season; also soal, turbot, and plaice, remarkably good in their kind; and ling, which from its being a thicker fish, mellowed, and better fed, is very justly preferred to any caught nearer our own coasts. Salmon, cod, pollock, are in great plenty, and pilchards in vast abundance. To these we may add the alga marina, fucus, or ore-weed, which serves to feed both their small and great cattle, manures their lands, is burned into kelp, is of use in physic, is sometimes preserved, sometimes pickled, and is in many other respects very beneficial to the inhabitants, of whom we are next to speak.

The people of Scilly in general are robust, handsome, active, hardy, industrious, generous, and good-natured; speak the English language with great propriety; have strong natural parts (though for want of a good school they have little education), as appears by their dexterity in the several employments to which they are bred. They cultivate most of their lands as well as can be expected under their present circumstances. They are bred from their infancy to the management of their boats, in which they excel; are good fishermen,

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fishermen, and excellent pilots. Their women are admirable housewives, spin their own wool, weave it into coarse cloth, and knit stockings. They have no timber of their own growth, and not much from England; yet they have many joiners and cabinet-makers, who, out of the fine woods which they obtain from captains of ships who put in here, make all kinds of domestic furniture in a very neat manner. They are free from the land-tax, malt-tax, and excise; and being furnished with plenty of liquors from the vessels which are driven into their roads for refreshment, for necessary repairs, or to wait for a fair wind, in return for provisions and other conveniences; this, with what little fish they can cure, makes the best part of their trade, if we except their kelp, which has been a growing manufacture for these fourscore years, and produces at present about 500 l. per annum.

The right honourable the earl of Godolphin is styled proprietor of Scilly, in virtue of letters-patent granted to the late earl, then lord Godolphin, dated the 25th of July 1698, for the term of 89 years, to be computed from the end and expiration of a term of 50 years, granted to Francis Godolphin, Esq; by king Charles I.; that is, from the year 1709 to 1798, when his lease determines. In virtue of this royal grant, his lordship is the sole owner of all lands, houses, and tenements; claims all the tithes, not only of the fruits of the earth, but of fish taken at sea and landed upon those premises; harbour-duties paid by ships; and one moiety of the wrecks, the other belonging to the admiralty. There is only one ecclesiastical person upon the islands, who resides at St Mary's, and visits the other inhabited islands once a year. But divine service is performed, and sermons read, every Sunday in the churches of those islands, by an honest layman appointed for that purpose; and there are likewise church-wardens and overseers, regularly chosen in every parish. As to the civil government, it is administered by what is called the *Court of Twelve*; in which the commander in chief, the proprietor's agent, and the chaplain, have their seats in virtue of their offices: the other nine are chosen by the people. These decide, or rather compromise, all differences; and punish small offences by fines, whippings, and the ducking-stool: as to greater enormities, we may conclude they have not been hitherto known; since, except for the soldiers, there is no prison in the islands. But in case of capital offences, the criminals may be transported to the county of Cornwall, and there brought to justice.

The great importance of these islands arises from their advantageous situation, as looking equally into St George's Channel, which divides Great Britain from Ireland, and the English Channel, which separates Britain from France. For this reason, most ships bound from the southward strive to make the Scilly islands, in order to steer their course with greater certainty. It is very convenient also for vessels to take shelter amongst them; which prevents their being driven to Milford Haven, nay sometimes into some port in Ireland, if the wind is strong at east; or, if it blows hard at north-west, from being forced back into some of the Cornish harbours, or even on the French coasts. If the wind should not be very high, yet if unfavourable or unsteady, as between the channels often happens, it is better to put into Scilly, than to beat about at sea in bad weather.

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The intercourse between these two channels is another motive why ships come in here, as choosing rather to wait in safety for a wind, than to run the hazard of being blown out of their course; and therefore a strong gale at east seldom fails of bringing thirty or forty vessels, and frequently a larger number, into Scilly; not more to their own satisfaction than to that of the inhabitants. Ships homeward-bound from America often touch there, from the desire of making the first land in their power, and for the sake of refreshment. These reasons have an influence on foreign ships, as well as our own; and afford the natives an opportunity of showing their wonderful dexterity in conducting them safely into St Mary's harbour, and, when the wind serves, through their sounds. Upon firing a gun and making a waft, a boat immediately puts off from the nearest island, with several pilots on board; and having with amazing activity dropped one of them into every ship, till only two men are left in the boat, these return again to land, as the wind and other circumstances direct, in one of their little coves.

Respecting a current which often prevails to the westward of Scilly, Mr Rennel has published some observations of much importance. "It is a circumstance (says he) well known to seamen, that ships, in coming from the Atlantic, and steering a course for the British channel, in a parallel somewhat to the south of the Scilly islands, do notwithstanding often find themselves to the north of those islands; or, in other words, in the mouth of St George's or of the Bristol channel. This extraordinary error has passed for the effects either of bad steerage, bad observations of latitude, or the indraught of the Bristol channel: but none of these account for it satisfactorily; because, admitting that at times there may be an indraught, it cannot be supposed to extend to Scilly; and the case has happened in weather the most favourable for navigating and for taking observations. The consequences of this deviation from the intended tract have very often been fatal; particularly in the loss of the Nancy packet in our own times, and that of Sir Cloudesley Shovel and others of his fleet at the beginning of the present century. Numbers of cases, equally melancholy, but of less celebrity, have occurred; and many others, in which the danger has been imminent, but not fatal, have scarcely reached the public ear. All of these have been referred to accident; and therefore no attempt seems to have been made to investigate the cause of them.

"I am, however, of opinion, that they may be imputed to a specific cause; namely, a current: and I shall therefore endeavour to investigate both that and its effects, that seamen may be apprized of the times when they are particularly to expect it in any considerable degree of strength; for then only it is likely to occasion mischief, the current that prevails at ordinary times being probably too weak to produce an error in the reckoning, equal to the difference of parallel between the south part of Scilly and the tract in which a commander, prudent in his measures, but unsuspicious of a current, would choose to sail."

The original cause of this current is the prevalence of westerly winds in the Atlantic, which impel the waters along the north coast of Spain, and accumulate them in the Bay of Biscay; whence they are projected along the coast of France, in a direction north-west by west

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west to the west of Scilly and Ireland. The major assigns strong reasons for the existence of this current between Ushant and Ireland, in a chart of the tracks of the Hector and Atlas, East India ships, in 1778 and 1787. The following remarks on the effect of this current are abridged from the author's work, which is well worthy the perusal of all sailors and shipmasters.

1st, If a ship crosses it obliquely, that is, in an east by south or more southerly direction, she will continue much longer in it, and of course be more affected by it, than if she crossed it more directly. The same consequence will happen if she crosses it with light winds. 2dly, A good observation of latitude at noon would be thought a sufficient warrant for running eastward during a long night; yet as it may be possible to remain in the current long enough to be carried from a parallel, which may be deemed a very safe one, to that of the rocks of Scilly, it would appear prudent, after experiencing a continuance of strong westerly winds in the Atlantic, and approaching the Channel with light southerly winds, either to make Ushant in time of peace, or at all events to keep in the parallel of $48^{\circ}45'$ at the highest. 3dly, Ships bound to the westward, from the mouth of the Channel, with the wind in the south-west quarter, should prefer the larboard tack. 4thly, Major Rennel approves the design of removing the lighthouse of Scilly (if it be not already removed) to the south-west part of the high rocks. 5thly, He recommends the sending a vessel, with time-keepers on board, to examine the soundings between the parallels of Scilly and Ushant; from the meridian of the Lizard Point as far west as the moderate depths extend. A set of time-keepers, he observes, will effect more in one summer, in skilful hands, than all the science of Dr Halley could do in the course of a long life.

In time of war, the importance of these islands is still more conspicuous; and it is highly probable, that they afforded the allies a place for assembling their fleet, when the Britons, Danes, Scots, and Irish, failed under the command of Anlaf, to attack King Athelstan; which convinced him of the necessity of adding them to his dominions. Upon the like principle, Henry VIII. when upon bad terms with his neighbours, caused an old fortress to be repaired; and Queen Elizabeth, who had more to fear, directed the construction of a castle, which, in part at least, still remains. But the most singular instance of the detriment that might arise from these islands falling into other hands than our own happened in 1651, when Sir John Grenville took shelter in them with the remains of the Cornish cavaliers. For the depredations committed by his frigates soon made it evident that Scilly was the key of the English commerce; and the clamours of the merchants thereupon rose so high, that the parliament were forced to send a fleet of fifty sail, with a great body of land-forces on board, under Sir George Ayscue and admiral Blake, who with great difficulty, and no inconsiderable loss, made themselves masters of Trefcaw and Brehar; where they erected those lines and fortifications near the remains of the old fortress that are called *Oliver's Castle*. But at length, finding that little was to be done in that way, they chose to grant Sir John Grenville a most honourable capitulation, as the surest means to recover places of such consequence: with which the parliament were very little

satisfied, till Mr Blake gave them his reasons; which appeared to be so well founded, that they directed the articles he had concluded to be punctually carried into execution.

SCIO, or CHIO, a celebrated island of the Archipelago (see CHIO). It is 32 miles long and 15 broad, is a mountainous but very pleasant country. The principal mountain, called anciently *Pelinaus*, presents to view a long lofty range of bare rock, reflecting the sun; but the recesses at its feet are diligently cultivated, and reward the husbandman by their rich produce. The slopes are clothed with vines. The groves of lemon, orange, and citron-trees, regularly planted, at once perfume the air with the odour of their blossoms, and delight the eye with their golden fruit. Myrtles and jasmines are interspersed, with olive and palm-trees, and cypresses. Amid these the tall minarees rise, and white houses glitter, dazzling the beholder. The inhabitants export a large quantity of pleasant wine to the neighbouring islands, but their principal trade is in silks. They have also a small commerce in wool, cheese, figs, and mastic. The women are better bred than in other parts of the Levant; and though the dress is odd, yet it is very neat. The partridges are tame, being sent every day into the fields to get their living, and in the evening are called back with a whistle. The town called *Scio* is large, pleasant, and the best built of any in the Levant, the houses being beautiful and commodious, some of which are terraced, and others covered with tiles. The streets are paved with flint-stones; and the Venetians, while they had it in their possession, made a great many alterations for the better. The castle is an old citadel built by the Genoese, in which the Turks have a garrison of 1400 men. The harbour of *Scio* is the rendezvous of all shipping that goes to or comes from Constantinople, and will hold a fleet of fourscore vessels. They reckon there are 10,000 Turks, 100,000 Greeks, and 10,000 Latins, on this island. The Turks took it from the Venetians in 1695. *Scio* is a bishop's see, and is seated on the sea-side, 47 miles west of Smyrna, and 210 south-west of Constantinople.

There are but few remains of antiquity in this place. "The most curious of them (says Dr Chandler) is that which has been named without reason the *School of Homer*. It is on the coast at some distance from the city northward, and appears to have been an open temple of Cybele, formed on the top of a rock. The shape is oval, and in the centre is the image of the goddess, the head and an arm wanting. She is represented, as usual, sitting. The chair has a lion carved on each side, and on the back. The area is bounded by a low rim or seat, and about five yards over. The whole is hewn out of the mountain, is rude, indistinct, and probably of the most remote antiquity. From the slope higher up is a fine view of the rich vale of *Scio*, and of the channel, with its shining islands, beyond which are the mountains on the mainland of Asia."

SCIOPPIUS (Gaspar), a learned German writer of the 17th century, was born at Neumark in the Upper Palatinate on the 27th of May 1576. He studied at the university with so much success, that at the age of 16 he became an author; and published books, says Ferrari, which deserved to be admired by old men. His dispositions did not correspond with his genius. Naturally passionate and malevolent, he assaulted without mercy

Scio
Scioppius.

Scioppius, mercy the character of eminent men. He abjured the system of the Protestants, and became a Roman catholic about the year 1599; but his character remained the same. He possessed all those qualities which fitted him for making a distinguished figure in the literary world; imagination, memory, profound learning, and invincible impudence. He was familiar with the terms of reproach in most of the languages. He was entirely ignorant of the manners of the world. He neither showed respect to his superiors, nor did he behave with decency to his equals. He was possessed with a frenzy of an uncommon kind: he was indeed a perfect fire-brand, scattering around him, as if for his amusement, the most atrocious calumnies. Joseph Scaliger, above all others, was the object of his satire. That learned man, having drawn up the history of his own family, and deduced its genealogy from princes, was severely attacked by Scioppius, who ridiculed his high pretensions. Scaliger in his turn wrote a book intitled *The Life and Parentage of Gaspar Scioppius*, in which he informs us, that the father of Scioppius had been successively a grave-digger, a journeyman stationer, a hawker, a soldier, a miller, and a brewer of beer. We are told that his wife was long kept as a mistress, and at length forsaken by a debauched man whom she followed to Hungary, and obliged to return to her husband; that then he treated her harshly, and condemned her to the lowest offices of servitude. His daughter, too, it is said, was as disorderly as her mother: that after the flight of her husband, who was going to be burned for some infamous crimes, she became a common prostitute; and at length grew so scandalous, that she was committed to prison. These severe accusations against the family of Scioppius inflamed him with more eagerness to attack his antagonist anew. He collected all the calumnies that had been thrown out against Scaliger, and formed them into a huge volume as if he had intended to crush him at once. He treated with great contempt the King of England, James I. in his *Ecclesiasticus*, &c. and in his *Collyrium Regium Britanniae Regi graviter ex oculis laboranti munere missum*; that is, "An Eye-salve for his Britannic Majesty." In one of his works he had the audacity to abuse Henry IV. of France in a most scurrilous manner, on which account his book was burned at Paris. He was hung in effigy in a farce which was represented before the king of England, but he gloried in his dishonour. Provoked with his insolence to their sovereign, the servants of the English ambassador assaulted him at Madrid, and corrected him severely; but he boasted of the wounds he had received. He published more than thirty defamatory libels against the Jesuits; and, what is very surprising, in the very place where he declaims with most virulence against that society, he subscribes his own name with expressions of piety. *I Gaspar Scioppius, already on the brink of the grave, and ready to appear before the tribunal of Jesus Christ to give an account of my works.* Towards the end of his life he employed himself in studying the Apocalypse, and affirmed that he had found the key to that mysterious book. He sent some of his expositions to Cardinal Mazarine, but the cardinal did not find it convenient to read them.

Ferrari tells us, that during the last fourteen years of his life he shut himself up in a small apartment, where he devoted himself solely to study. The same writer

acquaints us, that he could repeat the Scriptures almost entirely by heart; but his good qualities were eclipsed by his vices. For his love of slander, and the furious assaults which he made upon the most eminent men, he was called the *Cerberus of literature*. He accuses even Cicero of barbarisms and improprieties. He died on the 19th November 1649, at the age of 74, at Padua, the only retreat which remained to him from the multitude of enemies whom he had created. Four hundred books are ascribed to him, which are said to discover great genius and learning. The chief of these are, 1. *Veresimilium Libri IV.* 1596, in 8vo. 2. *Commentarius de arte critica*, 1661, in 8vo. 3. *De sua ad Catholicos migratione*, 1660, in 8vo. 4. *Notationes Criticae in Phaedrum, in Priapeia, Patavii*, 1664, in 8vo. 5. *Suspectarum lectionum Libri V.* 1664, in 8vo. 6. *Glossicum belli sacri*, 1619, in 4to. 7. *Collyrium regium*, 1611, in 8vo. 8. *Grammatica Philosophica*, 1644, in 8vo. 9. *Relatio ad Reges et Principes de Stratagematibus et Societatis Jesu*, 1641, in 12mo. This last mentioned book was published under the name of *Alphonso de Vargas*. He was at first well disposed to the Jesuits; but these fathers on one occasion opposed him. He presented a petition to the diet of Ratisbonne in 1630, in order to obtain a pension; but the Jesuits, who were the confessors both of the emperor and the electors, had influence to prevent the petition from being granted. From that moment Scioppius turned his whole artillery against the Jesuits.

SCIPIO (Publius Cornelius), a renowned Roman general, surnamed *Africanus*, for his conquests in that country. His other signal military exploits were, his taking the city of New Carthage in a single day; his complete victory over Hannibal, the famous Carthaginian general; the defeat of Syphax king of Numidia, and of Antiochus in Asia. He was as eminent for his chastity, and his generous behaviour to his prisoners, as for his valour. He died 180 B. C. aged about 51.

SCIPIO (Lucius Cornelius), his brother, surnamed *Asiaticus*, for his complete victory over Antiochus at the battle of Magnesia, in which Antiochus lost 50,000 infantry and 4000 cavalry. A triumph, and the surname of *Asiaticus*, were the rewards of his valour. Yet his ungrateful countrymen accused him, as well as his brother, of peculation; for which he was fined: but the public sale of his effects proved the falsehood of the charge; for they did not produce the amount of the fine. He flourished about 190 B. C.

SCIPIO (Publius Emilianus), was the son of Paulus Emilius; but being adopted by Scipio Africanus, he was called *Scipio Africanus junior*. He showed himself worthy of adoption, following the footsteps of Scipio Africanus, whom he equalled in military fame and public virtues. His chief victories were the conquest of Carthage and Numantia; Yet these signal services to his country could not protect him from an untimely fate. He was strangled in his bed by order of the Decemviri, who dreaded his popularity, 129 B. C. aged 56.

SCIRO, an island of the Archipelago, to the west of Mytilene, to the north-east of Negropont, and to the south-east of Sciati. It is 15 miles in length, and 8 in breadth. It is a mountainous country, but has no mines. The vines make the beauty of the island, and the wine is excellent; nor do the natives want wood.

Scioppius
||
Sciro.

Scirocho
||
Sciurus.

wood. There is but one village; and that is built on a rock, which runs up like a sugar-loaf, and is 10 miles from the harbour of St George. The inhabitants are all Greeks, the *cadi* being the only Turk among them.

SCIROCHO, or SIROCHO, a name generally given in Italy to every unfavourable wind. In the south-west it is applied to the hot suffocating blasts from Africa, and in the north-east it means the cold bleak winds from the Alps.

SCIRPUS, in botany: A genus of the monogynia order, belonging to the triandria class of plants; and in the natural method ranking under the 3d order, *Calamariæ*. The glumes are paleaceous, and imbricated all round. There is no corolla; and only one beardless seed.

SCIRRHUS, in surgery and medicine, a hard tumor of any part of the body, void of pain, arising, as is supposed, from the inspissation and induration of the fluids contained in a gland, though it may also appear in any other part of the body, especially in the fat; being one of the ways in which an inflammation terminates. These tumors are exceedingly apt to degenerate into cancers.

SCITAMINEÆ. See BOTANY, p. 459.

SCIURUS, the SQUIRREL; a genus of quadrupeds belonging to the order of glires. It has two fore-teeth in each jaw, the superior ones shaped like wedges, and the inferior ones compressed. There are 11 species; of which the most remarkable are,

1. The *vulgaris*, or common squirrel, with ears terminated with long tufts of hair; large, lively, black eyes; head, body, legs, and tail, of a bright reddish brown; breast and belly white; hair on each side the tail lies flat. In Sweden and Lapland, it changes in winter into grey. In Russia it is sometimes found black. In many parts of England there is a beautiful variety, with milk white tails.—This species inhabits Europe and North America, the northern and the temperate parts of Asia: and a variety is even found as far south as the isle of Ceylon. It is a neat, lively, active animal; lives always in woods: in the spring, the female is seen pursued from tree to tree by the males, feigning an escape from their embraces; makes its nest of moss and dried leaves between the fork of two branches; brings three or four young at a time; has two holes to its nest; stops up that on the side the wind blows, as Pliny justly remarks; lays in a hoard of winter provision, such as nuts, acorns, &c.; in summer, feeds on buds and young shoots; is particularly fond of those of fir, and the young cones; sits up to eat, and uses its fore-feet as hands; covers itself with its tail; leaps to a surprising distance; when disposed to cross a river, a piece of bark is its boat, its tail the sail; is in great plenty in Dunmallet, and there called *Conn*. Boys frequently nurse this beautiful and active animal under cats. "There are three creatures, the squirrel, the field-mouse, and the bird called the *nuthatch*, which live much on hazel nuts; and yet they open them each in a different way. The first, after rasping off the small end, splits the shell in two with his long fore-teeth, as a man does with his knife; the second nibbles a hole with his teeth, so regular as if drilled with a wimble, and yet so small, that one would wonder how the kernel can be extracted through it; while the last pecks

an irregular ragged hole with its bill; but as this artist has no paws to hold the nut firm while he pierces it, like an adroit workman, he fixes it, as it were in a vice, in some cleft of a tree, or in some crevice; when, standing over it, he perforates the stubborn shell. While at work, they make a rapping noise, that may be heard at a considerable distance." *White's Selborne*.

2. The *cinereus*, or grey squirrel, with plain ears; hair of a dull grey colour, mixed with black, and often tinged with dirty yellow; belly and insides of the legs white; tail long, bushy, grey, and striped with black: size of a half-grown rabbit.—Inhabits the woods of Northern Asia, North America, Peru, and Chili. They are very numerous in North America, do incredible damage to the plantations of maize, run up the stalks and eat the young ears. Descend in vast flocks from the mountains, and join those that inhabit the lower parts; are proscribed by the provinces, and a reward of three-pence per head given for every one that is killed. Such a number was destroyed one year, that Pennsylvania alone paid in rewards L. 8000 of its currency. Make their nests in hollow trees, with moss, straw, wool, &c. Feed on maize in the season, and on pine-cones, acorns, and masts of all kinds: form holes under-ground, and there deposit a large stock of winter provision. Descend from the trees, and visit their magazines when in want of meat; are particularly busy at the approach of bad weather; during the cold season keep in their nest for several days together; seldom leap from tree to tree, only run up and down the bodies; their hoards often destroyed by swine; when their magazines are covered with deep snow, the squirrels often perish for want of food; are not easily shot, nimbly changing their place when they see the gun levelled; have the actions of the common squirrel; are easily tamed; and their flesh is esteemed very delicate. Their furs, which are imported under the name of *petit-gris*, are valuable, and used as linings to cloaks.

3. The *niger*, or black squirrel, with plain ears; sometimes wholly black, but often marked with white on the nose, the neck, or end of the tail; the tail shorter than that of the former; the body equal. It inhabits the north of Asia, North America, and Mexico; breeds and associates in separate troops; is equally numerous with the former; commits as great ravages among the maize; makes its nest in the same manner, and forms, like them, magazines for winter food. The finest are taken near the lake Baikal, and about Barguzinskoi-ostrog, upon the Upper Angara, in the district of Nertschinsk, which are the best in all Siberia; these continue black the whole year, the others grow rusty in summer.—There is a variety with plain ears; coarse fur mixed with dirty white and black; throat and inside of the legs and thighs black; tail much shorter than those of squirrels usually are; of a dull yellow colour, mixed with black; body of the size of the grey squirrel. It inhabits Virginia; the planters call it the *cat squirrel*.

4. The *flavus*, or fair squirrel, with the body and tail of a flaxen colour; of a very small size, with plain round ears, and rounded tail. Inhabits the woods near Amadabad, the capital of Guzerat, in great abundance, leaping from tree to tree. Linnæus says it is an inhabitant of South America.

5. The *striatus*, or ground squirrel, with plain ears; ridge

Plate
CCCCXLV.
fig. 1.

Sciurus

ridge of the back marked with a black streak; each side with a pale yellow stripe, bounded above and below with a line of black; head, body, and tail, of a reddish brown; the tail the darkest: breast and belly white; nose and feet pale-red; eyes full.—Inhabits the north of Asia, but found in the greatest abundance in the forests of North America. They never run up trees except they are pursued, and find no other means of escaping: they burrow, and form their habitations under ground, with two entrances, that they may get access to the one in case the other is stopped up. Their retreats are formed with great skill, in form of a long gallery, with branches on each side, each of which terminates in an enlarged chamber, as a magazine to store their winter provision in; in one they lodge the acorns, in another the maize, in a third the hickory nuts, and in the last their favourite food the chinquapin chesnut. They very seldom stir out during winter, at least as long as their provisions last; but if that fails, they will dig into cellars where apples are kept, or barns where maize is stored, and do a great deal of mischief; but at that time the cat destroys great numbers, and is as great an enemy to them as to mice. During the maize harvest these squirrels are very busy in biting off the ears, and filling their mouths so full with the corn, that their cheeks are quite distended. It is observable that they give great preference to certain food; for if, after filling their mouths with rye, they happen to meet with wheat, they sling away the first, that they may indulge in the last. They are very wild, bite severely, and are scarcely ever tamed; the skins are of little use, but are sometimes brought over to line cloaks.

6. The *glis*, or fat squirrel, with thin naked ears; body covered with soft ash-coloured hair; belly whitish; tail full of long hair: from nose to tail, near six inches; tail, four and a half: thicker in the body than the common squirrel.—Inhabits France and the south of Europe; lives in trees, and leaps from bough to bough; feeds on fruits and acorns; lodges in the hollows of trees; remains in a torpid state during winter, and grows very fat. It was esteemed a great delicacy by the Romans, who had their *gliraria*, places constructed to keep and feed them in.

Fig. 2.

7. The *sagitta*, or arrow squirrel, with a small round head, cloven upper lip: small blunt ears, two small warts at the utmost corner of each eye, with hairs growing out of them: neck short: four toes on the fore feet; and instead of a thumb, a slender bone two inches and a half long, lodged under the lateral membrane, serving to stretch it out: from thence to the hind legs extends the membrane, which is broad, and a continuation of the skin of the sides and belly: there are five toes on the hind feet; and on all the toes, sharp compressed bent claws: the tail is covered with long hairs disposed horizontally: colour of the head, body, and tail, a bright bay; in some parts inclining to orange: breast and belly of a yellowish white: length from nose to tail, eighteen inches; tail, fifteen.—Inhabits Java, and others of the Indian islands: leaps from tree to tree as if it flew: will catch hold of the boughs with its tail. Niewhoff, p. 354. describes this under the name of the flying cat, and says the back is black.

8. The *volans*, or flying squirrel, with round naked ears, full black eyes, and a lateral membrane from the fore to the hind legs: tail with long hairs disposed hori-

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zontally, longest in the middle: its colour above, a brownish ash; beneath, white tinged with yellow: much less than the common squirrel. Inhabits Finland, Lapland, Poland, Russia, North America, and New Spain: lives in hollow trees: sleeps in the day: during the night is very lively: is gregarious, numbers being found in one tree: leaps from bough to bough sometimes at the distance of ten yards: this action has improperly been called flying, for the animal cannot go in any other direction than forward; and even then cannot keep an even line, but sinks considerably before it can reach the place it aims at: sensible of this, the squirrel mounts the higher in proportion to the distance it wishes to reach: when it would leap, it stretches out the fore-legs, and extending the membranes becomes specifically lighter than it would otherwise be, and thus is enabled to spring further than other squirrels that have not this apparatus. When numbers leap at a time, they seem like leaves blown off by the wind. Their food the same as the other squirrels. They are easily tamed: bring three or four young at a time. See fig. 3 & 4, the one representing the animal in what is called a *flying*, the other in a *sitting*, posture.

SCIURUS, in botany: A genus of the monogynia order, belonging to the diandria class of plants; and in the natural method ranking with those that are doubtful. The calyx is quinque-dentate; the corolla bilabiate; the filaments are barren; the capsules five, and joined together; bivalved, unilocular, with one seed. Of this there is one species, viz. *aromatica*, a native of Guiana.

SCLAVONIA, a country of Europe, between the rivers Save, the Drave, and the Danube. It is divided into six counties, viz. Posagra, Zabrab, Creis, Warasden, Zreim, and Walpon, and belongs to the house of Austria. It was formerly called a *kingdom*; and is very narrow, not being above 75 miles in breadth; but it is 300 in length, from the frontiers of Austria to Belgrade. The eastern part is called *Ratzia*, and the inhabitants *Ratzians*. These, from a particular notion, are of the Greek church. The language of Sclavonia is the mother of four others, namely, those of Hungary, Bohemia, Poland, and Russia.

SCLERANTHUS, in botany: A genus of the digynia order, belonging to the dodecandria class of plants, and in the natural method ranking under the 22d order, *Caryophyllei*. The calyx is monophyllous; there is no corolla; there are two seeds contained in the calyx.

SCLERIA, in botany: A genus of the tetrandria order, belonging to the monoccia class of plants; and in the natural method ranking under the 4th order, *Gramina*. The calyx has a gluma, with from two to six valves; the flowers numerous; the seed a sort of nut, small, oblong, and shining. There are six species, all of them natives of the West Indies.

SCLEROTICS, medicines proper to harden and consolidate the flesh of the parts to which they are applied; as purslain, house-leek, flea-wort, garden nightshade, &c.

SCOLOPAX, in ornithology, a genus belonging to the order of grallæ. The back is cylindrical, obtuse, and longer than the head; the nostrils are linear; the face is covered; and the feet have four toes. There are 18 species; of which the following are the principal.

A X

1. The

Sciurus

||
Scolopax.

Scolopax.

Plate
cccclv.

1. The *arquata*, or curlew, frequents our sea-coasts and marshes in the winter time in large flocks, walking on the open sands; feeding on shells, frogs, crabs, and other marine insects. In summer they retire to the mountainous and unfrequented parts of the country, where they pair and breed. Their eggs are of a pale olive colour, marked with irregular but distinct spots of pale brown. Their flesh is very rank and fishy, notwithstanding an old English proverb in its favour. Curlews differ much in weight and size; some weighing 37 ounces, others not 22: the length of the largest to the tip of the tail, 25 inches; the breadth, three feet five inches; the bill is seven inches long: the head, neck, and coverts of the wings, are of a pale brown; the middle of each feather, black; the breast and belly white, marked with narrow oblong black lines: the back is white, spotted with a few black strokes: the quill-feathers are black, but the inner webs spotted with white; the tail is white, tinged with red, and beautifully barred with black; the legs are long, strong, and of a bluish grey colour; the bottoms of the toes flat and broad, to enable it to walk on the soft mud, in search of food.

2. The *phaopus*, or whimbrel, is much less frequent on our shores than the curlew; but its haunts, food, and general appearance, are much the same. It is observed to visit the neighbourhood of Spalding (where it is called the *curlew knot*) in vast flocks in April, but continues there no longer than May; nor is it seen there any other time of the year: it seems at that season to be on its passage to its breeding place, which Mr Pennant suspects to be among the Highlands of Scotland. The specific difference is the size; this never exceeding the weight of 12 ounces.

3. The *rusticola*, or woodcock, during summer inhabits the Alps of Norway, Sweden, Polish Prussia, the march of Brandenburg, and the northern parts of Europe: they all retire from those countries the beginning of winter, as soon as the frosts commence; which force them into milder climates, where the ground is open, and adapted to their manner of feeding. They live on worms and insects, which they search for with their long bills in soft grounds and moist woods.—Woodcocks generally arrive here in flocks, taking advantage of the night or a mist: they soon separate; but before they return to their native haunts, pair. They feed and fly by night; beginning their flight in the evening, and return the same way or through the same glades to their day retreat. They leave England the latter end of February, or beginning of March; not but they have been known to continue here accidentally. These birds appear in Scotland first on the eastern coasts, and make their progress from east to west. They do not arrive in Breadalbane, a central part of the kingdom, till the beginning or middle of November; nor the coasts of Nether Lorn, or of Ross-shire, till December or January: they are very rare in the remote Hebrides, and in the Orkneys. A few stragglers now and then arrive there. They are equally scarce in Caithness. Our species of woodcock is unknown in North America: but a kind is found that has the general appearance of it; but is scarce half the size, and wants the bars on the breast and belly. The weight of the woodcock is usually about 12 ounces; the length near 14 inches; and the breadth, 26; the bill is three

inches long, dusky towards the end, reddish at the base; tongue slender, long, sharp, and hard at the point; the eyes large, and placed near the top of the head, that they may not be injured when the bird thrusts its bill into the ground; from the bill to the eyes is a black line; the fore-head is a reddish ash colour; the crown of the head, the hind part of the neck, the back, the coverts of the wings, and the scapulars, are prettily barred with a ferruginous red, black, and grey; but on the head the black predominates: the quill-feathers are dusky, indented with red marks. The chin is of a pale yellow; the whole under side of the body is of a dirty white, marked with numerous transverse lines of a dusky colour. The tail consists of 12 feathers, dusky or black on the one web, and marked with red on the other; the tips above, are ash-coloured, below white; which, when shooting on the ground was in vogue, was the sign the fowler discovered the birds by. The legs and toes are livid; the latter divided almost to their very origin, having only a very small web between the middle and interior toes; as those of the two species of snipes found in England.

4. The *agocephala*, or godwit, weighs 12 ounces and a half; the length is 16 inches; the breadth 27; the bill is four inches long, turns up a little, black at the end, the rest a pale purple; from the bill to the eye is a broad white stroke; the feathers of the head, neck, and back, are of a light reddish brown, marked in the middle with a dusky spot; the belly and vent feathers white, the tail regularly barred with black and white. The six first quill-feathers are black; their interior edges of a reddish brown; the legs in some are dusky, in others of a greyish blue, which perhaps may be owing to different ages; the exterior toe is connected as far as the first joint of the middle toe with a strong serrated membrane. The male is distinguished from the female by some black lines on the breast and throat; which in the female are wanting. These birds are taken in the fens, in the same season and in the same manner with the ruffs and reeves*; and when fattened are esteemed a great delicacy, and sell for half a crown or five shillings a piece. A stale of the same species is placed in the net. They appear in small flocks on our coasts in September, and continue with us the whole winter; they walk on the open sands like the curlew, and feed on insects.

5. The *glottis*, or greenshank, is in length to the end of the tail, 14 inches; to that of the toes, 20; its breadth, 25. The bill is two inches and a half long; the upper mandible black, straight, and very slender; the lower reflects a little upwards; the head and upper part of the neck are ash-coloured, marked with small dusky lines pointing down; over each passes a white line; the coverts, the scapulars, and upper part of the back, are of a brownish ash-colour; the quill-feathers dusky, but the inner webs speckled with white; the breast, belly, thighs, and lower part of the back, are white; the tail is white, marked with undulated dusky bars: the inner coverts of the wings finely crossed with double and treble rows of a dusky colour. It is a bird of an elegant shape, and small weight in proportion to its dimensions, weighing only six ounces. The legs are very long and slender, and bare above two inches higher than the knees. The exterior toe is united to the middle toe, as far as the second joint, by a strong mem-

Scolopax.

* See
Tringa.

Scolopax, membrane which borders their sides to the very end.—
Scolopendra. These birds appear on the English coasts and wet grounds in the winter-time in but small numbers.

6. The *calidris*, or red-shank, is found on most of our shores; in the winter-time it conceals itself in the gutters, and is generally found single or at most in pairs. It breeds in the fens and marshes; and flies round its nest when disturbed, making a noise like a lapwing. It lays four eggs, whitish tinged with olive, marked with irregular spots of black chiefly on the thicker end. It weighs five ounces and a half: the length is 12 inches, the breadth 21; the bill near two inches long, red at the base, black towards the point. The head, hind part of the neck, and scapulars, are of a dusky ash-colour, obscurely spotted with black; the back is white, sprinkled with black spots; the tail elegantly barred with black and white; the cheeks, under side of the neck, and upper part of the breast, are white, streaked downward with dusky lines; the belly white; the exterior webs of the quill-feathers are dusky; the legs long, and of a fine bright orange colour; the utmost toe connected to the middle toe by a small membrane; the inmost by another still smaller.

7. The *gallinago*, or common snipe, weighs four ounces; the length, to the end of the tail, is near 12 inches; the breadth about 14; the bill is three inches long, of a dusky colour, flat at the end, and often rough like shagrin above and below. The head is divided lengthwise with two black lines, and three of red, one of the last passing over the middle of the head, and one above each eye: between the bill and the eyes is a dusky line; the chin is white; the neck is varied with brown and red. The scapulars are beautifully striped lengthwise with black and yellow; the quill-feathers are dusky; but the edge of the first is white, as are the tips of the secondary feathers: the quill-feathers next the back are barred with black and pale red; the breast and belly are white; the coverts of the tail are long, and almost cover it; they are of a reddish brown colour. The tail consists of 14 feathers, black on their lower part, then crossed with a broad bar of deep orange, another narrow one of black; and the ends white, or pale orange. The vent feathers are of a dull yellow; the legs pale green; the toes divided to their origin. In the winter-time snipes are very frequent in all our marshy and wet grounds, where they lie concealed in the rushes, &c. In summer they disperse to different parts, and are found in the midst of our highest mountains as well as of our low moors; their nest is made of dried grass; they lay four eggs of a dirty olive colour, marked with dusky spots; their young are so often found in England, that we doubt whether they ever entirely leave this island. When they are disturbed much, particularly in the breeding season, they soar to a vast height, making a singular bleating noise; and when they descend, dart down with vast rapidity: it is also amusing to observe the cock, while his mate sits on her eggs, poise himself on her wings, making sometimes a whistling and sometimes a drumming noise. Their food is the same with that of the woodcock; their flight very irregular and swift, and attended with a shrill scream. They are most universal birds, found in every quarter of the globe, and in all climates.

SCOLOPENDRA, in zoology, a genus of insects belonging to the order of aptera. The feet are very

numerous, being as many on each side as there are joints in the body; the antennæ are setaceous: there are two jointed pappi, and the body is depressed.—These insects are very formidable and noxious in the warm countries, where they grow to the length of a quarter of a yard or more, though in this climate they seldom grow above an inch long. The scolopendra is also called the *centipes* from its number of feet. In the East Indies it grows to six inches in length, and as thick as a man's finger: it consists of many joints; and from each joint proceeds a leg on each side: they are covered with hair, and seem to have no eyes; but there are two feelers on the head, with which they find out the way they are to pass: the head is very round, with two small sharp teeth, with which they inflict wounds that are very painful and dangerous. A sailor that was bit by one on board a ship felt excessive pain, and his life was supposed to be in danger; but by the application of roasted onions to the part he recovered. The bite of the scolopendra *moritans* § in Jamaica is § See Plate said to be as poisonous as the sting of a scorpion.— ccccxlv. Some of the species live in holes in the earth: others under stones, and among rotten wood; so that the removing of these is exceedingly dangerous in the countries where the scolopendræ breed.—These insects, like the scorpion, are supposed to be produced perfect from the parent or the egg, and to undergo no changes after their first exclusion. They are found of all sizes; which is a sufficient reason for believing that they preserve their first appearance through the whole of their existence. It is probable, however, that, like most of this class, they often change their skins; but of this we have no certain information. The scolopendra *forficata* is the largest in this country, of a dun colour, smooth, and composed of nine scaly segments, without reckoning the head. The feet are 15 in number on each side, and the last longer than the rest, and turned backwards, form a kind of forked tail. The antennæ are twice the length of the head, and consist of 42 short segments. The insect's progressive motion is very quick, and sometimes serpentine. It is found under stones on the ground, under flower-pots and garden boxes.

SCOLYMUS, in botany: A genus of the polygamia æqualis order, belonging to the syngenesia class of plants; and in the natural method ranking under the 49th order, *Compositæ*. The receptacle is paleaceous; the calyx imbricated and prickly, without any pappus.

SCOMBER, the MACKEREL, in ichthyology, a genus belonging to the order of thoracici. The head is smooth and compressed, and there are seven rays in the gill membrane. There are ten species;—of which the most remarkable are the following.

1. The scomber, or common mackerel, a summer-fish of passage that visits our shores in vast shoals. It is less useful than other species of gregarious fish, being very tender, and unfit for carriage; not but that it may be preserved by pickling and salting, a method, we believe, practised only in Cornwall, where it proves a great relief to the poor during winter. It was a fish greatly esteemed by the Romans, because it furnished the precious garum, a sort of pickle that gave a high relish to their fauces; and was besides used medicinally. It was drawn from different kinds of fish, but that made from the mackerel had the preference: the best was made at

Scomber.

Carthage, vast quantities of mackerel being taken near an adjacent isle, called from that circumstance *Scombraria*, and the garum, prepared by a certain company in that city, bore a high price, and was distinguished by the title of *garum sociorum*. This fish is easily taken by a bait; but the best time is during a fresh gale of wind, which is thence called a *mackerel gale*. In the spring the eyes of mackerel are almost covered with a white film; during which period they are half blind. This film grows in winter, and is cast the beginning of summer. It is not often that it exceeds two pounds in weight, yet there have been instances of some that weighed upwards of five. The nose is taper and sharp pointed; the eyes large; the jaws of an equal length; the teeth small, but numerous. The form of this fish is very elegant. The body is a little compressed on the sides: towards the tail it grows very slender, and a little angular. It is a most beautiful fish when alive; for nothing can equal the brilliancy of its colour, which death impairs, but does not wholly obliterate.

2. The thunnus, or tunny, was a fish well known to the ancients: it made a considerable branch of commerce: the time of its arrival in the Mediterranean from the ocean was observed, and stations for taking them were established in places it most frequented.

There are still very considerable tunny fisheries on the coast of Sicily, as well as several other parts of the Mediterranean; where they are cured, and make a great article of provision in the adjacent kingdoms.— They are caught in nets, and amazing quantities are taken; for they come in vast shoals, keeping along the shores. See *Tunny-FISHERY*.

They frequent our coasts, but not in shoals like the tunnies of the Mediterranean. They are not uncommon in the lochs on the western coast of Scotland; where they come in pursuit of herrings; and often during night strike into the nets, and do considerable damage. When the fishermen draw them up in the morning, the tunny rises at the same time towards the surface, ready to catch the fish that drop out. On perceiving it, a strong hook baited with a herring, and fastened to a rope, is instantly flung out, which the tunny seldom fails to take. As soon as hooked, it loses all spirit; and after a very little resistance submits to its fate. It is dragged to the shore and cut up, either to be sold fresh to people who carry it to the country markets, or is preserved salted in large casks. The pieces, when fresh, look exactly like raw beef; but when boiled turn pale, and have something of the flavour of salmon.

One that was taken when Mr Pennant was at Inverary in 1769, weighed 460 pounds. The fish was seven feet ten inches long: the greatest circumference five feet seven; the least near the tail one foot six. The body was round and thick, and grew suddenly very slender towards the tail, and near that part was angular. The irides were of a plain green: the teeth very minute. The tail was in form of a crescent; and two feet seven inches between tip and tip. The skin on the back was smooth, very thick, and black. On the belly the scales were visible. The colour of the sides and belly was silvery, tinged with cerulean and pale purple; near the tail marbled with grey.

They are known on the coast of Scotland by the

name of *mackrelsture*: *Mackrel*, from being of that genus; and *sture*, from the Danish, *stor* "great."

SCONE, a town of Scotland, remarkable for being the place where the kings were anciently crowned. W. Long. 3. 10. N. Lat. 56. 28. Here was once an abbey of great antiquity, which was burnt by the reformers at Dundee. Kenneth II. upon his conquest of the Picts in the ninth century, having made Scone his principal residence, delivered his laws, called the *Macalpine laws*, from a *tumulus*, named the *Mote Hill of Scone*. The present palace was begun by the earl of Gowrie; but was completed by Sir David Murray of Goshpatie, the favourite of king James VI. to whom that monarch had granted it; and the new possessor in gratitude to his benefactor put up the king's arms in several parts of the house. It is built around two courts. The dining room is large and handsome; and has an ancient and magnificent chimney-piece, and the king's arms, with this motto:

Nobis hæc invicta miserunt centum sex proavi.

Beneath are the Murray arms. In the drawing room is some good old tapestry, with an excellent figure of Mercury. In a small bed-chamber is a medley scripture-piece in needle-work, with a border of animals, pretty well done, the work of queen Mary during her confinement in Loch Leven Castle. The gallery is about 155 feet long, the top arched, divided into compartments filled with paintings in water-colours. The pieces represented are various kinds of huntings; that of Nimrod, and king James and his train, appear in every piece. Till the destruction of the abbey, the kings of Scotland were crowned here, sitting in the famous wooden chair which Edward I. transported to Westminster abbey, to the great mortification of the Scots, who looked upon it as a kind of palladium. Charles II. before the battle of Worcester, was crowned in the present chapel. The old pretender resided for some time at Scone in 1715; and his son paid it a visit in 1745.

SCOPARIA, in botany: A genus of the monogynia order, belonging to the tetrandria class of plants; and in the natural method ranking under the 40th order, *Personata*. The calyx is quadripartite; the corolla the same, and rotaceous; the capsule unilocular, bivalved, and polyspermous.

SCOPER, or SCUPPER HOLES, in a ship, are holes made through the sides, close to the deck, to carry off the water that comes from the pump.

SCOPOLIA, in botany: A genus of the octandria order, belonging to the gynandria class of plants; and in the natural method ranking under the 11th class, *Sarmentacea*. The calyx is diphyllous; the corolla quadrifid; the antheræ coalesce in two columns, one placed above the other. Of this there is only one species, viz. the *Composita*.

SCORBUTUS, the SCURVY. See MEDICINE, n° 8.

SCORDIUM, or WATER-GERMANDER, in botany, a species of TEUCRIUM.

SCORIA, or DROSS, among metallurgists, is thecrement of metals in fusion; or, more determinately speaking, is that mass which is produced by melting metals and ores: when cold, it is brittle, and not dissoluble in water, being properly a kind of glass.

Soone
||
Scoria.

Scorifica-
tion,
Scorpio.

SCORIFICATION, in metallurgy, is the art of reducing a body, either entirely or in part, into scoria.

SCORPÆNA, in ichthyology, a genus belonging to the order of thoracici. The head is large and sharp; the eyes are near each other; there are teeth in the jaws, palate, and fauces; and there are seven rays in the membrane of the gill. The species are three, viz. the *porcus*, *scrofa*, and *horrida*. According to Mr Willoughby, the scorpæna is a fish of the anguilliform kind, called by the people of Cornwall *father-lasher*. *Scorpena* is also the name of a fish caught in many parts of the Mediterranean. It seldom grows to more than a pound weight. Its body is long, but not flattened, and is moderately thick. Its head is extremely large, and is armed with prickles, and it grows gradually less from thence to the tail. The prickles about the head are accounted venomous, and the fishermen usually cut them off as soon as the fish is caught. Its tail is not forked, but rounded at the end. The belly and belly-fins are reddish.

Plate
ccccxlv.

SCORPIO, in zoology, a genus of insects belonging to the order of aptera. It has eight feet, besides two frontal claws; the eyes are eight in number, three on each side of the thorax, and two on the back. It has two claw-shaped palpi, a long jointed tail, with a pointed weapon at the extremity; it has likewise two combs situated betwixt the breast and abdomen. There are six species, all natives of southern climates.

Of all the classes of noxious insects the scorpion is the most terrible, whose shape is hideous, whose size among the insects is enormous, and whose sting is generally fatal. Happy for Britain, the scorpion is entirely a stranger among us! In several parts of the continent of Europe it is but too well known, though it seldom grows above four inches long: but in the warm tropical climates, it is seen a foot in length, and in every respect as large as a lobster, which it somewhat resembles in shape. There have been enumerated nine different kinds of this dangerous insect, including species and varieties, chiefly distinguished by their colour; there being scorpions yellow, brown, and ash-coloured; others that are the colour of rusty iron, green, pale yellow, black, claret colour, white, and grey. There are four principal parts distinguishable in this animal; the head, the breast, the belly, and the tail. The scorpion's head seems, as it were, jointed to the breast; in the middle of which are seen two eyes; and a little more forward, two eyes more, placed in the fore part of the head: those eyes are so small, that they are scarcely perceivable; and it is probable the animal has but little occasion for seeing. The mouth is furnished with two jaws: the undermost is divided into two, and the parts notched into each other, which serves the animal as teeth, and with which it breaks its food, and thrusts it into its mouth: these the scorpion can at pleasure pull back into its mouth, so that no part of them can be seen. On each side of the head are two arms, each composed of four joints; the last of which is large, with strong muscles, and made in the manner of a lobster's claw. Below the breast are eight articulated legs, each divided into six joints; the two hindmost of which are each provided with two crooked claws, and here and there covered with hair. The belly is divided into seven little rings; from the lowest

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of which is continued a tail, composed of six joints, which are bristly, and formed like little globes, the last being armed with a crooked sting. This is that fatal instrument which renders this insect so formidable: it is long, pointed, hard, and hollow; it is pierced near the base by two small holes, through which, when the animal stings, it ejects a drop of poison, which is white, caustic, and fatal. The reservoir in which this poison is kept, is in a small bladder near the tail, into which the venom is distilled by a peculiar apparatus. If this bladder be greatly pressed, the venom will be seen issuing out through the two holes above-mentioned; so that it appears, that when the animal stings, the bladder is pressed, and the venom issues through the two apertures into the wound.

We have here given the common account of the sting of these noxious animals; but though we cannot pretend to determine between them, we shall lay before our readers the following observations from a treatise on *Tropical Diseases*, &c. by Dr Moseley of the Chelsea Hospital. "Galen justly observes, that a person who had not witnessed the fact, would not suppose that so small an injury as the sting of a scorpion, or the bite of a poisonous spider, could produce the violent effects which they do in the whole body. He says, the aculeus, or sting, of a scorpion ends in the minutest point: and has no perforation through which any poison can pass into the wound. Yet, he says, we must suppose the venom to be some spiritual substance, or moisture, in which a great power is concentrated in a small compass. Before I had an opportunity (says Dr Moseley) of examining this subject, my respect for the opinion of Galen made me doubt the accuracy of Leeuwenhoek, Redi, Mead, and others, who assert that there is an aperture near the cuspis of a scorpion's sting; and that through this aperture a liquid poison is injected when a wound is inflicted. Repeated experiments, with the best glasses, have never enabled me to discover any foramen, or opening, whatever."

The following cure may also be worth the reader's notice. "Mrs Pidgeley, at Kingston in Jamaica, in January 1781, was stung by a scorpion in the foot, above the little toe. The part became instantly red and painful; and soon after livid. The pain increased to great severity. Some rum was applied to the wound, on which the pain immediately left the foot, and passed up to the groin, with great agony. The pain still passed upwards, and diffused itself about the pit of the stomach, neck, and throat, attended with tremors, cold sweats, and languors. As the pain passed the abdomen, it occasioned a violent purging and fainting, which ceased on its advancing higher. I* was called to her, * Dr Moseley, and gave her the following medicines, a few doses of which removed every symptom. She had been extremely ill for thirty-six hours. *R. Sal. Succin. ʒij; Camphor. gr. xij; Cinnabar. Antimon. gr. x; Confect. Card. q. s. fiant boli sex.* One of these was taken every hour, with four spoonfuls of the following mixture: *R. Aq. Menthae ʒ vij; Elix. Paregoric. ʒ ij; Syr. Croci ʒ ff; Misce.*"

There are few animals more formidable, or more truly mischievous, than the scorpion. As it takes refuge in a small place, and is generally found sheltering in houses, it must frequently sting those among whom

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whom it resides. In some of the towns of Italy, and in France, in the province of Languedoc, it is one of the greatest pests that torments mankind: but its malignity in Europe is trifling, when compared to what the natives of Africa and the east are known to experience. In Batavia, where they grow twelve inches long, there is no removing any piece of furniture, without the utmost danger of being stung by them. Bosman assures us, that along the Gold Coast they are often found larger than a lobster; and that their sting is inevitably fatal. In Europe, however, they are by no means so large, so venomous, or so numerous. The general size of this animal does not exceed two or three inches; and its sting is very seldom found to be fatal. Maupertius, who made several experiments on the scorpion of Languedoc, found it by no means so invariably dangerous as had till then been represented. He provoked one of them to sting a dog, in three places of the belly where the animal was without hair. In about an hour after, the poor animal seemed greatly swollen, and became very sick: he then cast up whatever he had in his bowels; and for about three hours continued vomiting a whitish liquid. The belly was always greatly swollen when the animal began to vomit; but this operation always seemed to abate the swelling; which alternately swelled, and was thus emptied, for three hours successively. The poor animal after this fell into convulsions, bit the ground, dragged himself along upon his fore-feet, and at last died, five hours after being bitten. He was not partially swollen round the place which was bitten, as is usual after the sting of a wasp or a bee; but his whole body was inflated, and there only appeared a red spot on the places where he had been stung.

Some days after, however, the same experiment was tried upon another dog, and even with more aggravated cruelty: yet the dog seemed no way affected by the wounds: but, howling a little when he received them, continued alert and well after them; and soon after was set at liberty, without showing the smallest symptoms of pain. So far was this poor creature from being terrified at the experiment, that he left his own master's house, to come to that of the philosopher, where he had received more plentiful entertainment. The same experiment was tried by fresh scorpions upon seven other dogs, and upon three hens; but not the smallest deadly symptom was seen to ensue. From hence it appears, that many circumstances, which are utterly unknown, must contribute to give efficacy to the scorpion's venom. Whether its food, long fasting, the season, the nature of the vessels it wounds, or its state of maturity, contribute to or retard its malignity, is yet to be ascertained by succeeding experiment. In the trials made by our philosopher, he employed scorpions of both sexes, newly caught, and seemingly vigorous and active. The success of this experiment may serve to shew, that many of those boasted antidotes which are given for the cure of the scorpion's sting, owe their success rather to accident than their own efficacy. They only happened to cure when their sting was no way dangerous; but in cases of actual malignity, they might probably be utterly unserviceable.

The scorpion of the tropical climates being much larger than the former, is probably much more venomous. Helbigius, however, who resided for many years

in the east, assures us, that he was often stung by the scorpion, and never received any material injury from the wound: a painful tumor generally ensued; but he always cured it by rubbing the part with a piece of iron or stone, as he had seen the Indians practise before him, until the flesh became insensible. Seba, Moore, and Bosman, however, give a very different account of the scorpion's malignity: and assert, that, unless speedily relieved, the wound becomes fatal.

It is certain, that no animal in the creation seems endued with such an irascible nature. They have often been seen, when taken and put into a place of security, to exert all their rage against the sides of the glass-vessel that contained them. They will attempt to sting a stick when put near them; and attack a mouse or a frog, while those animals are far from offering any injury. Maupertius put three scorpions and a mouse into the same vessel together, and they soon stung the little animal in different places. The mouse, thus assaulted, stood for some time upon the defensive, and at last killed them all, one after another. He tried this experiment, in order to see whether the mouse, after it had killed, would eat the scorpions; but the little quadruped seemed satisfied with the victory, and even survived the severity of the wounds it had received. Wolkamer tried the courage of the scorpion against the large spider, and inclosed several of both kinds in glass vessels for that purpose. The success of this combat was very remarkable. The spider at first used all its efforts to intangle the scorpion in its web, which it immediately began spinning; but the scorpion rescued itself from the danger, by stinging its adversary to death: it soon after cut off, with its claws, all the legs of the spider, and then sucked all the internal parts at its leisure.—If the scorpion's skin had not been so hard, Wolkamer is of opinion that the spider would have obtained the victory; for he had often seen one of these spiders destroy a toad.

The fierce spirit of this animal is equally dangerous to its own species; for scorpions are the cruellest enemies to each other. Maupertius put about 100 of them together in the same glass; and they scarce came into contact when they began to exert all their rage in mutual destruction: there was nothing to be seen but one universal carnage, without any distinction of age or sex; so that in a few days there remained only 14, which had killed and devoured all the rest.

But their unnatural malignity is still more apparent in their cruelty to their offspring. He inclosed a female scorpion, big with young, in a glass vessel, and she was seen to devour them as fast as they were excluded: there was but one only of the number that escaped the general destruction, by taking refuge on the back of its parent; and this soon after revenged the cause of its brethren, by killing the old one in its turn.

Such is the terrible and unrelenting nature of this insect, which neither the bonds of society nor of nature can reclaim: it is even asserted, that, when driven to an extremity, the scorpion will often destroy itself. The following experiment was ineffectually tried by Maupertius; "But," says Mr Goldsmith, "I am so well assured of it by many eye-witnesses, who have seen it both in Italy and America, that I have no doubt remaining of its veracity. A scorpion, newly caught,

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is

Scolopax Galinago
or Snipe.



Scolopax Phaeopus
or Whimbrel.



Scolopax *Arguata*
or Curlew.



Scolopax Rusticola
or Woodcock.



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Fig. 1.
Sciurus Cinereus
or Grey Squirrel.



Scelopendra Morsitans.

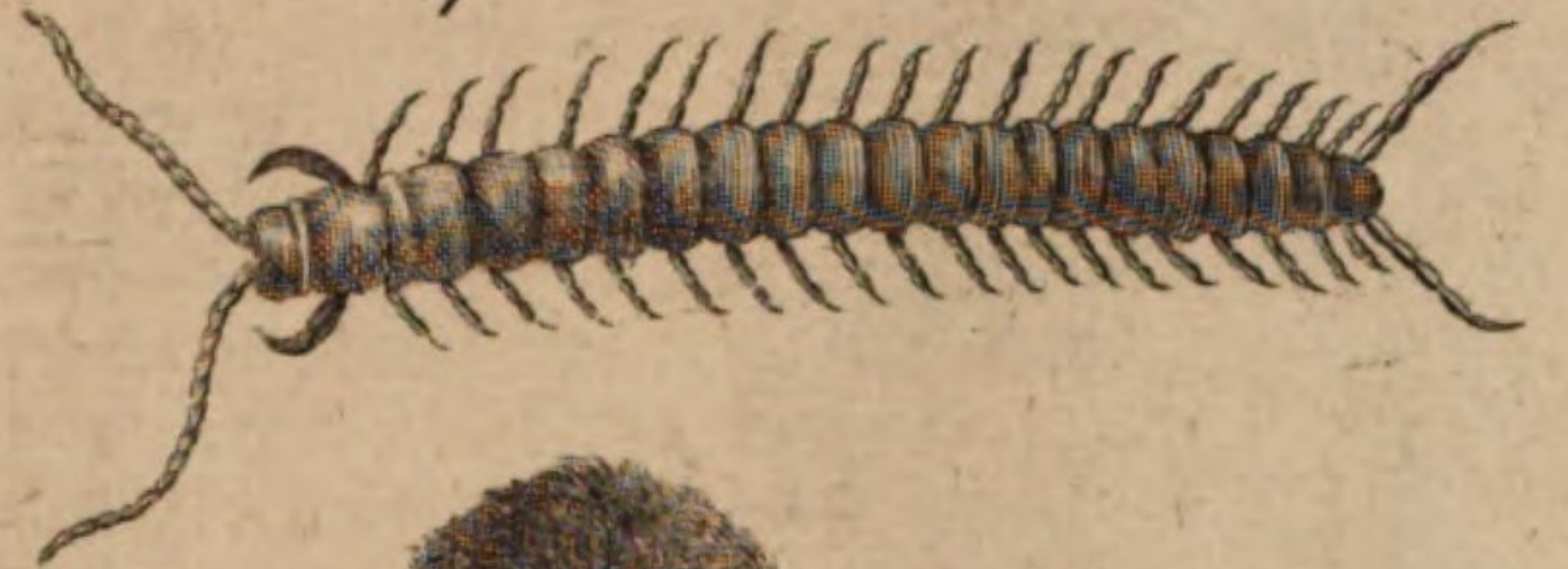


Fig. 3.
Sciurus Volans
or Flying Squirrel.
in a flying posture.



Fig. 4.
Flying Squirrel.
in a sitting posture.



Fig. 2.
Sciurus Sagitta
or Sailing Squirrel.



Scorpio, is placed in the midst of a circle of burning charcoal, and thus an egress prevented on every side: the scorpion, as I am assured, runs for about a minute round the circle, in hopes of escaping: but finding that impossible, it stings itself on the back of the head; and in this manner the undaunted suicide instantly expires."

It is happy for mankind that these animals are thus destructive to each other; since otherwise they would multiply in so great a degree as to render some countries uninhabitable. The male and female of this insect are very easily distinguishable; the male being smaller and less hairy. The female brings forth her young alive, and perfect in their kind. Redi having bought a quantity of scorpions, selected the females, which, by their size and roughness, were easily distinguishable from the rest, and putting them in separate glass vessels, he kept them for some days without food. In about five days one of them brought forth 38 young ones, well-shaped, and of a milk-white colour, which changed every day more and more into a dark rusty hue. Another female, in a different vessel, brought forth 27 of the same colour; and the day following the young ones seemed all fixed to the back and belly of the female. For near a fortnight all these continued alive and well: but afterwards some of them died daily; until, in about a month, they all died except two.

Were it worth the trouble, these animals might be kept living as long as curiosity should think proper. Their chief food is worms and insects; and upon a proper supply of these, their lives might be lengthened to their natural extent. How long that may be, we are not told; but if we may argue from analogy, it cannot be less than seven or eight years; and perhaps, in the larger kind, double that duration. As they have somewhat the form of the lobster, so they resemble that animal in casting their shell, or more properly their skin; since it is softer by far than the covering of the lobster, and set with hairs, which grow from it in great abundance, particularly at the joinings. The young lie in the womb of the parent, each covered up in its own membrane, to the number of 40 or 50, and united to each other by an oblong thread, so as to exhibit altogether the form of a chaplet.

Such is the manner in which the common scorpion produces its young: but there is a scorpion of America produced from the egg, in the manner of the spider. The eggs are no longer than pins points; and they are deposited in a web, which they spin from their bodies, and carry about with them, till they are hatched. As soon as the young ones are excluded from the shell, they get upon the back of the parent, who turns her tail over them, and defends them with her sting. It seems probable, therefore, that captivity produces that unnatural disposition in the scorpion which induces it to destroy its young; since, at liberty, it is found to protect them with such unceasing assiduity. For the various modes of preventing the fatal consequences of the bites of these and other noxious animals, we refer to Moseley's treatise above quoted.

SCORPIO, *Scorpion*, in astronomy, the eighth sign of the zodiac denoted by the character ♏ . See *ASTRONOMY*.

SCORPION Fly. See *PANORPA*.

SCORPIURUS, *CATERPILLARS*, in botany: A genus of the decandria order, belonging to the diadelphia

class of plants; and in the natural method ranking under the 32d order, *Papilionacea*. The legumen is contracted by incisions on the inside betwixt every two seeds, revolved round.

There are four species; the most remarkable of which is the *vermiculata*, a native of Italy and Spain. It is an annual plant, with trailing herbaceous stalks, which at each joint have a spatular-shaped leaf with a long foot-stalk. From the wings of the leaves come out the foot-stalks of the flowers, which sustain at the top one yellow butterfly flower, succeeded by a thick twisted pod having the size and appearance of a larger caterpillar, from whence it had this title. This has long been preserved in the gardens of this country, more on account of its odd shape than for any great beauty. It is propagated by sowing the seeds on a bed of light earth; and when the plants come up, they must be kept free from weeds and thinned, so that there may be a foot distance between them.

SCORZONERA, *VIPER-GRASS*, in botany: A genus of the polygamia æqualis order, belonging to the syn-genesia class of plants; and in the natural method ranking under the 49th order, *Compositæ*. The receptacle is naked; the pappus plumy; the calyx imbricated, with scales membranaceous on their margins.

The most remarkable species is the *hispanica*, or common scorzonera, which is cultivated in the gardens of this country, both for culinary and medicinal purposes. The root is carrot-shaped, about the thickness of a finger, covered with a dark brown skin, is white within, and has a milky juice. The stalk rises three feet high, is smooth, branching at the top, and garnished with a few narrow leaves, whose base half embrace the stalk. The flowers are of a bright yellow colour, and terminate the stalks in scaly empalements composed of many narrow tongue-shaped hermaphrodite florets lying imbricatum over each other like the scales of fish, and are of a bright yellow colour. After these are decayed, the germen, which sits in the common empalements, turns to oblong cornered seeds, having a roundish ball of feathered down at the top. This plant is propagated by seeds; and must be carefully thinned and kept free from weeds, otherwise the plants will be weak.

The roots of scorzonera were formerly much celebrated for their alexipharmic virtues, and for throwing out the small-pox; but have now almost entirely lost their character: however, as they abound with an acrid juice, they may sometimes be of use for strengthening the viscera, and promoting the fluid secretions.

SCOT, a customary contribution laid upon all subjects, according to their abilities. Whoever were assessed in any sum, though not in equal proportions, were said to pay scot and lot.

SCOT (Michael) of Balwirie, a learned Scottish author of the 13th century. This singular man made the tour of France and Germany; and was received with some distinction at the court of the emperor Frederic II. Having travelled enough to gratify his curiosity or his vanity, he returned to Scotland, and gave himself up to study and contemplation. He was skilled in languages; and, considering the age in which he lived, was no mean proficient in philosophy, mathematics, and medicine. He translated into Latin from the Arabic, the history of animals by the celebrated physician

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fician Avicenna. He published the whole works of Aristotle, with notes, and affected much to reason on the principles of that great philosopher. He wrote a book concerning *The Secrets of Nature*, in which he treats of generation, physiognomy, and the signs by which we judge of the temperaments of men and women. We have also a tract of his *On the Nature of the Sun and Moon*. He there speaks of the *grand operation*, as it is termed by alchymists, and is exceedingly solicitous about the *projected powder*, or the *philosopher's stone*. He likewise published what he calls *Mensa Philosophica*, a treatise replete with astrology and chiromancy. He was much admired in his day, and was even suspected of magic; and had Roger Bacon and Cornelius Agrippa for his panegyrists.

SCOT (Reginald), a judicious writer in the 16th century, was the younger son of Sir John Scot of Scot's-hall, near Smeeth in Kent. He studied at Hart-hall in the university of Oxford; after which he retired to Smeeth, where he lived a studious life, and died in 1599. He published, *The perfect Platform of a Hop-garden*; and a book intitled, *The Discovery of Witchcraft*; in which he showed that all the relations concerning magicians and witches are chimerical. This work was not only censured by king James I. in his *Dæmonology*, but by several eminent divines; and all the copies of it that could be found were burnt.

SCOTAL, or SCOTALE, is where any officer of a forest keeps an ale-house within the forest, by colour of his office, making people come to his house, and there spend their money for fear of his displeasure. We find it mentioned in the charter of the forest, cap. 8. "Nullus forrestarius faciat *Scotallas*, vel garbas colligat, vel aliquam collectam faciat," &c. *Manwood*, 216. —The word is compounded of *scot* and *ale*, and by transposition of the words is otherwise called *alefbot*.

SCOTER. See ANAS, n° 6.

NOVA SCOTIA, or *New SCOTLAND*, one of the British settlements in North America, situated between 43° and 49° north latitude, and between 60° and 67° west longitude, is bounded by the river St Laurence on the north; by the gulph of St Laurence and the Atlantic ocean on the east; by the same ocean on the south; and by Canada and New England on the west.—In the year 1784, this province was divided into two governments. The province and government now styled *New Brunswick* is bounded on the westward of the mouth of the river St Croix, by the said river to its source, and by a line drawn due north from thence to the southern boundary of the province of Quebec, to the northward by the said boundary as far as the western extremity of the Bay de Chaleurs, to the eastward by the said bay to the gulph of St Laurence to the bay called *Bay Verte*, to the south by a line in the centre of the Bay of Fundy, from the river St Croix aforesaid, to the mouth of the Musquat river, by the said river to its source, and from thence by a due east line across the Isthmus into the Bay Verte, to join the eastern lot above described, including all islands within six leagues of the coast.

The chief rivers are, the river of St Laurence, which forms the northern boundary. The rivers Ristigouche and Nipisiguit run from west to east, and fall into the bay of St Laurence. The rivers of St John, Passamaquid, Penobscot, and St Croix, which run from

north to south, fall into Fundy Bay, or the sea a little to the eastward of it.

The seas adjoining to it are, the Atlantic ocean, Fundy Bay, and the gulph of St Laurence. The lesser bays are, Chenigto and Green Bay upon the isthmus which joins the north part of Nova Scotia to the south; and the Bay of Chaleurs on the north-east; the Bay of Chedibucto on the south-east; the Bay of the Islands, the Ports of Bart, Chebucto, Prosper, St Margaret, La Heve, port Maltois, port Rysignol, port Vert, and port Joly, on the south; port La Tour on the south-east; port St Mary, Anapolis, and Minas on the south side of Fundy Bay, and port Roseway, now the most populous of all.—The chief capes are, Cape Portage, Ecoumenac, Tourmentin, Cape Port, and Epis, on the east; Cape Fogerie and Cape Canceau on the south-east; Cape Blanco, Cape Vert, Cape Theodore, Cape Dore, Cape La Heve, and Cape Negro, on the south; Cape Sable and Cape Fourche on the south-west.—The lakes are very numerous, but have not yet received particular names.

The face of the country, when viewed at a distance, presents a pleasingly variegated appearance of hills and valleys, with scarcely any thing like mountains to interrupt the prospect, especially near the sea. A nearer approach discovers those sublime and beautiful scenes which are so far superior to the gaudy embellishments of art. Immense forests, formed of the tallest trees, the growth of ages, and reaching almost to the clouds, everywhere cover and adorn the land: Their leaves falling in autumn, add continually to that crust of moss, vegetables, and decaying wood, that has for many centuries been accumulating; whilst the rays of the sun, unable to pierce the thick shade which everywhere covers the ground, leaves it in a perpetual state of damp and rottenness; a circumstance which contributes, in no small degree, to increase the sharpness of the air in winter.

The clouds, flying over the higher grounds, which are covered in every direction with one vast forest, and arrested by the attraction of the woods, fill the country with water. Every rock has a spring, and every spring causes a swamp or morass, of greater or less extent in proportion to its cause: hence it is, that travelling becomes almost impracticable in summer, and is seldom attempted, but in the fall of the year, when winter begins to set in, and the ground is already frozen.

The land throughout the peninsula is in no part mountainous, but frequently rises into hills of gradual ascent, everywhere clothed with wood. From these arise innumerable springs and rivulets, which not only fertilize and adorn the country, but have formed, in the midst of it, a large lake or piece of fresh water, which is of various depths, and of which, however, little more is known, than that it has upon its borders very large tracts of meadow-land highly improveable. That part of the province which is beyond the Bay of Fundy, and extends to the river St Laurence, rises also gradually as we advance from the sea quite to Canada, but is, however, hardly anywhere mountainous. Its lands are for the most part very rich, particularly at a distance from the sea; and its woods abound with the hardest and loftiest trees.

Though this country, like Canada, is subject to long and

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and severe winters, succeeded by sudden and violent heats, often much greater than what are felt in the same latitudes in Europe, yet it cannot be accounted an unhealthy climate. The air in general in winter is very sharp, frosty, and dry; the sky serene and unclouded, by which every kind of exercise adapted to the season is rendered pleasant and agreeable. The fogs are frequent near the sea, but seldom spread themselves to any distance in land.

The winter commonly breaks up with heavy rains, and the inhabitants experience hardly any of the delights of the spring, which in England is accounted the most agreeable season of the year. From a lifeless and dreary appearance, and the gloomy scenes of winter wrapped around the vegetable world, the country throws off its disgusting attire, and in a few days exhibits a grand and pleasant prospect; the vegetation being inconceivably rapid, nature passes suddenly from one extreme to another, in a manner utterly unknown to countries accustomed to a gradual progression of seasons. And, strange as it may appear, it is an acknowledged fact, a fact which furnishes a certain proof of the purity of the air, that these sudden changes seldom, if ever, affect the health of strangers or Europeans.

In this country agriculture has yet made but small progress. Nova Scotia is almost a continued forest, producing every kind of wood which grows in the neighbouring provinces of New England. Four fifths of all the lands in the province are covered with pines, which are valuable not only for furnishing masts, spars, lumber for the sugar plantations, and timber for building, but for yielding tar, pitch, and turpentine, commodities which are all procured from this useful tree, and with which the mother-country may in a few years easily be supplied.

All the various species of birch, beech, and maple, and several sorts of spruce, are found in all parts in great abundance; as also numerous herbs and plants, either not common to, or not known in, England. Amongst these none is more plentiful than sarsaparilla, and a plant whose root resembles rhubarb in colour, taste, and effects; likewise the Indian or mountain tea, and maiden-hair, an herb much in repute for the same purpose, with shrubs producing strawberries, raspberries, and many other pleasant fruits, with which the woods in summer are well stored: Of these wild productions the cherries are best, though smaller than ours, and growing in bunches somewhat resembling grapes. The sassafras tree grows plentifully in common with others; but amongst them none is more useful to the inhabitants than a species of maple, distinguished by the name of the *sugar tree*, as affording a considerable quantity of that valuable ingredient. See SUGAR.

Amongst the natural productions of Nova Scotia, it is necessary to enumerate their iron-ore, which is supposed equally good with that found in any part of America.

Lime-stone is likewise found in many places; it is extremely good, and is now much used for building; independent of which, it gives the farmers and landholders a great advantage for improving the ground, as it is found by experience to be one of the most approved things in the world for that purpose.

Several of the useful and most common European fruits have been planted in many places; so that the

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province now produces great quantities of apples, some pears, and a few plums, which are all good of their kind, especially the former. The smaller fruits, such as currants, gooseberries, &c. grow to as great perfection as in Europe; and the same may be said of all the common and useful kinds of garden plants. Amongst these their potatoes have the preference, as being the most serviceable in a country abounding with fish; and indeed they are not to be exceeded in goodness by any in the world. The maize, or Indian corn, is a native of much warmer climates; and, though planted here, never arrives at more than two thirds of its natural bigness; a defect which arises as well from the shortness of the summer as the gravelly nature of the soil. Tobacco may likewise be cultivated with ease in Nova Scotia, as it is already everywhere in Canada, from Lake Champlain to the isle of Orleans, for the purpose of internal consumption.

This country is not deficient in the animal productions of the neighbouring provinces, particularly deer, beavers, and otters. Wild fowl, and all manner of game, and many kinds of European fowls and quadrupeds, have from time to time been brought into it and thrive well. At the close of March the fish begin to spawn, when they enter the rivers in such shoals as are incredible. Herrings come up in April, and the sturgeon and salmon in May. But the most valuable appendage of New Scotland is the Cape Sable coast, along which is one continued range of cod-fishing banks and excellent harbours. This fishery employs a great number of men, in some seasons not less than 10,000, when 120,000 quintals will be caught, of which 40,000 may be exported. These, at the lowest price, must bring into the colony L. 26,000 Sterling, either in cash or in commodities necessary to the inhabitants.

Notwithstanding the comparatively uninviting appearance of this country, it was here that some of the first European settlements were made. The first grant of lands in it was given by James I. to his secretary Sir William Alexander, from whom it had the name of *Nova Scotia* or *New Scotland*. Since that period it has frequently changed hands from one private proprietor to another, and from the French to the English nation backward and forward.

It was in 1604 that the French first settled in Nova Scotia, to which they gave the name of *Acadia*. Instead of fixing towards the east of the peninsula, where they would have had larger seas, an easy navigation, and plenty of cod, they chose a small bay, afterwards called French Bay, which had none of these advantages. It has been said, that they were invited by the beauty of Port Royal, where a thousand ships may ride in safety from every wind, where there is an excellent bottom, and at all times four or five fathoms of water, and eighteen at the entrance. It is more probable that the founders of this colony were led to choose this situation, from its vicinity to the countries abounding in furs, of which the exclusive trade had been granted to them. This conjecture is confirmed by the following circumstance: that both the first monopolizers, and those who succeeded them, took the utmost pains to divert the attention of their countrymen, whom an unsettled disposition, or necessity, brought into these regions, from the clearing of the woods, the breeding of cattle, fishing, and every kind of culture; choosing rather to

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Nova
Scotia.

engage the industry of these adventurers in hunting or in trading with the savages.

This colony was yet in its infancy when the settlement, which has since become so famous under the name of *New England*, was first established in its neighbourhood. The rapid success of the plantations in this new colony did not much attract the notice of the French. This kind of prosperity did not excite any jealousy between the two nations. But when they began to suspect that there was likely to be a competition for the beaver trade and furs, they endeavoured to secure to themselves the sole property of it, and were unfortunate enough to succeed.

At their first arrival in Acadia, they had found the peninsula, as well as the forests of the neighbouring continent, peopled with small savage nations, who went under the general name of *Abenakies*. Though equally fond of war as other savage nations, they were more sociable in their manners. The missionaries easily insinuating themselves among them, had so far inculcated their tenets, as to make enthusiasts of them. At the same time that they taught them their religion, they inspired them with that hatred which they themselves entertained for the English name. This fundamental article of their new worship, being that which made the strongest impression on their senses, and the only one that favoured their passion for war, they adopted it with all the rage that was natural to them. They not only refused to make any kind of exchange with the English, but also frequently disturbed and ravaged the frontiers of that nation.

This produced perpetual hostilities between the New Englanders and the French settlers in Acadia, till that province was, at the peace of Utrecht, for ever ceded to the English, who seemed not for a long time to discover the value of their new acquisition. They restored to it its ancient name of *Nova Scotia*; and having built a slight fortification at Port-Royal, which they called *Annapolis* in honour of Queen Anne, they contented themselves with putting a very small garrison into it. In process of time, however, the importance of Nova Scotia to the commerce of Great Britain began to be perceived; and at the peace of 1749, the ministry offered particular advantages to all persons who chose to go over and settle in Acadia. Every soldier, sailor, and workman, was to have 50 acres of land for himself, and ten for every person he carried over in his family. All non-commissioned officers were allowed 80 for themselves, and 15 for their wives and children; ensigns 200; lieutenants 300; captains 400; and all officers of a higher rank 600; together with 30 for each of their dependents. The land was to be tax free for the first ten years, and never to pay above one livre two sols six deniers* for fifty acres. Beside this the government engaged to advance or reimburse the expences of passage, to build houses, to furnish all the necessary instruments for fishery or agriculture, and to defray the expences of subsistence for the first year. These encouragements determined 3790 persons, in the month of May 1749, to go to America, in hopes of bettering their fortune,

*About 18
Sterling.

Thus encouraged, the province of Nova Scotia began to flourish, though in 1769 it sent out only 14 vessels and 148 boats, which together amounted to 7324 tons, and received 22 vessels and 120 boats, which to-

gether made up 7006 tons. They constructed three sloops, which did not exceed 110 tons burden. Their exportation for Great Britain and for the other parts of the globe did not amount to more than 729,850 livres 12 sols 9 deniers†. Continuing, however, true to its allegiance when the other colonies threw off the dominion of Great Britain, it has now become a place of great consequence both to the mother-country and the West Indies. Its shipping and seamen are rapidly increasing, as well as its produce, which affords the pleasing prospect of being able to supply itself with all the necessaries of life. The number of persons who have abandoned their habitations in the more southern provinces, and settled either there or in Canada, cannot be estimated, by the most moderate calculation, at less than 80,000; and it is without doubt the most convenient in point of situation of any province in America for a maritime power of Europe to be possessed of.

Scotia,
Scotland.† About
L. 30,410,
8 s. 10 d.
Sterling.

SCOTIA, in architecture, a semicircular cavity or channel between the torus in the bases of columns.

SCOTISTS, a sect of school-divines and philosophers, thus called from their founder *J. Duns Scotus*, a Scottish cordelier, who maintained the immaculate conception of the virgin, or that she was born without original sin, in opposition to Thomas Aquinas and the Thomists.

As to philosophy, the Scotists were, like the Thomists, Peripatetics (see PERIPATETICS); only distinguished by this, that in each being, as many different qualities as it had, so many different formalities did they distinguish; all distinct from the body itself, and making as it were so many different entities; only these were metaphysical, and as it were superadded to the being. The Scotists and Thomists likewise disagreed about the nature of the divine co-operation with the human will, the measure of divine grace that is necessary to salvation, and other abstruse and minute questions, which it is needless to enumerate.

SCOTLAND, the country of the Scots, or that part of Great Britain lying to the north of the Tweed; is situated between the 54th and 59th degrees of north latitude, and extends in length about 278 miles, and in some places near 180 in breadth; containing an area of 27,794 miles. On the south it is bounded by England; on the north, east, and west, by the Deucalionian, German, and Irish seas.

It is extremely difficult to give any satisfactory account of the origin of the appellation of *Scots*, from which the country has derived its name. It has puzzled the most eminent antiquaries, whose conjectures serve rather to perplex than to clear up the difficulty. Nor is this to be wondered at, when Varro and Dionysius could not agree about the etymon of *Italia*, nor Plutarch and Solinus about that of *Rome*. All that we know with any degree of certainty, concerning the appellation of *Scot*, amounts to this—That it was at first a term of reproach, and consequently framed by enemies, rather than assumed by the nation distinguished by that name. The Highlanders, who were the genuine descendants of the ancient Scots, are absolutely strangers to the name, and have been so from the beginning of time. All those who speak the Gaelic language call themselves *Albanich* or *Gael*, and their country *Alba* or *Gael-doehd*.

Origin of
the name.

The Picts, who possessed originally the northern and eastern,

¹ Scotland. eastern, and in a latter period also the more southern, division of North Britain, were at first more powerful than the Caledonians of the west. It is therefore probable, that the Picts, from a principle of malevolence and pride, were ready to traduce and ridicule their weaker neighbours of Argyle. These two nations spoke the same language, the Gaelic. In that language *Scot*, or *Scode*, signifies a corner or small division of a country. Accordingly, a corner of north Britain is the very name which Giraldus Cambrensis gives the little kingdom of Argyle, which the six sons of Muredus king of Ulster were said, according to his information, to have erected in Scotland. *Scot* in Gaelic is much the same with *little* or *contemptible* in English; and *Scotlan*, literally speaking, signifies a *small flock*; metaphorically, it stands for a *small body of men*. (*Dr Macpherson's Dissert.*)

Others observe, that in the same language the word *Scuit* signifies a *wanderer*, and suppose that this may have been the origin of the name of *Scot*; a conjecture which they think is countenanced by a passage in Ammianus Marcellinus (l. xxvii.), who characterizes the men by the epithet of *roaming*; "*per diversa vagantes*." (*Mr Macpherson, and Mr Whitaker*).

All that we can say is, that for some one of the reasons couched under the above disparaging epithets, their malicious or sneering neighbours, the Picts or the Britons, may have given the appellation of *Scots* to the ancestors of the Scottish nation.

At what time the inhabitants of the west of Scotland came to be distinguished by this name is uncertain. Porphyrius the philosopher is the first who mentions them, about the year of the Christian era 267; and towards the middle of the 4th century we find them mentioned with other British nations by Am. Marcellinus, in the passage above referred to.

² And of the people.

The origin of the Scots has been warmly disputed by many antiquaries of note; particularly by Mr Macpherson and Mr Whitaker. The first contends, that they are of Caledonian, the latter, that they are of Irish extraction. Each supports his position with such arguments and authorities, that an impartial inquirer is almost at a loss which of their opinions he ought to espouse. What appears most probable is, that they are both partly in the right and partly in the wrong.—The Scots seem to have been originally descended from Britons of the south, or from Caledonians, who being pressed forward by new colonies from Gaul, till they came to the western shore of Britain, passed over from thence into Ireland, probably about 100 years before the Christian era. About the year of Christ 320, they returned again into Britain; or at least a large colony of them, under the conduct of Fergus, and settled on the western coasts of Caledonia, from whence they had formerly migrated. As early as the year 340, we find them associated with the Picts in their expeditions to the Roman province; and for 90 or 100 years after, their ravages are frequently mentioned by the Roman and British writers. (*Whitaker's hist. of the Britons*, 284).

³ Extent of territory.

The territory of the ancient Scots, before the annexation of Pictavia, comprehended all that side of Caledonia which lies along the north and western ocean, from the frith of Clyde to the Orkneys. Towards the east, their dominions were divided from the Pictish

territories by those high mountains which run from Scotland. Dumbarton to the frith of Tain.—In process of time, the Scots, under the reign of Kenneth the son of Alpin, became so powerful as to subdue entirely their neighbours the Picts, and gave their own denomination to all Caledonia, Pictavia, and Valentia; all which are still comprehended under the general name of *Scotland*.

Like those of all other nations, the historians of Scotland assume too great an antiquity for their countrymen; however, they are much less extravagant in this respect than many others. By them the reign of Fergus, the first Scots monarch, is placed in 330 B. C. He was the son of Ferchard an Irish prince; and is said to have been called into Scotland by the Caledonians, to assist them against the southern Britons, with whom they were then at war. Having landed on one of the Æbudæ or western isles, he had a conference with the Caledonians, whose language and manners he found to be the same with those of his countrymen. Having then landed in Scotland, and taken the field at the head of his new allies, he engaged the Britons under their king Coilus. Victory declared in favour of the Scots; Coilus was defeated and killed; and from him the province of Kyle first received its name. After this Fergus was declared king of the Scots, with the solemnity of an oath. But he did not long enjoy his new dignity: for having been recalled to Ireland to quiet some commotions there, he was drowned, by a sudden tempest, on his return, at a place in Ireland called from him *Knock-Fergus*, or *Carrick-Fergus*; i. e. Fergus's Rock.

⁴ Fergus the first king of Scotland.

Fergus was succeeded by his brother Feritharis, to the prejudice of his two sons Ferlegus and Mainus. This, we are told by the ancient Scottish writers, was done in conformity to a law, by which it was ordained, that whilst the children of their kings were infants, one of their relations who was reckoned the most fit for the government should be raised to the throne, but that after his death the sovereignty should return to the sons of the former king. This was the case at present; however, Ferlegus, impatient for the crown, made a formal demand of it from his uncle. The dispute being referred to an assembly of the states, Feritharis was confirmed on the throne; and Ferlegus would have been condemned for sedition, had not his uncle interposed. However, he was imprisoned; but having made his escape, he fled first to the Picts, and then to the Britons, in order to excite them against Feritharis. With both he failed in accomplishing his purpose: but, in the mean time, his uncle being stabbed in his bed, the suspicion fell upon Ferlegus, who was thereupon set aside from the succession, and died in obscurity, the throne being conferred upon his brother Mainus.

⁵ Collateral succession in use among the Scots.

The reigns of Mainus, Dornadil, and Nothat, afford nothing remarkable, excepting that Dornadil, who was a great hunter, instituted the laws of hunting in this country. Nothat was killed in a battle with Reuther his nephew; upon which the latter was immediately invested with the sovereignty. A bloody war ensued, in which both parties were reduced to the last extremity, and glad at length to conclude a peace. The fate of Reuther is not known; but it is generally supposed that he ended his life in the year 187 B. C.

The reigns of Reutha, Thereus, Jasina, and Finnan,

4 Y 2

afford

Scotland. afford no remarkable transactions, excepting that under the last we find the first beginnings of the Scottish parliament; as he enacted, that kings should do nothing without the consent of their grand council.— After him followed Dursus, Even, and Gillus, whose reigns afford nothing of consequence. Even II. the nephew of Finnian, who succeeded Gillus, is said to have built the towns of Innerlochy and Inverness. He overcame Belus king of the Orkneys, who had invaded Scotland; and was succeeded by his son Eder, in whose time Julius Cæsar invaded the southern parts of this island. Eder is said to have assisted the Britons against the common enemy. He was succeeded, after a reign of 48 years, by his son Even III. who is represented as a monster of cruelty and lust. Not content with having 100 noble concubines of his own, he made a law that a man might marry as many wives as he could maintain; and that the king should have the first night with every noble bride, and the nobles the like with the daughters of their tenants. Nor was he less remarkable for his cruelty and rapaciousness, which at last occasioned a rebellion; and Even was dethroned, imprisoned, and put to death.

6
A scandalous law concerning marriages.

7
Invasion of Scotland by Agricola.

We meet with nothing memorable in the history of Scotland from this time to that of Agricola, excepting that the famous Caractacus, who was carried prisoner to Rome, is said to have been one of the Scottish monarchs; which, however, seems not very probable, as the Romans in his time had not penetrated near so far as Scotland. The invasion of Agricola happened during the reign of Corbred, called by the Roman historians *Galgacus*. Agricola having completed the conquest of the southern parts, and in a great measure civilized the inhabitants, formed a like plan with regard to Scotland. It is probable, that at this time the Caledonians or Scots were rendered more formidable than ever they had been, by the accession of great numbers from the south; for though the Romans had civilized the greatest part, it cannot be doubted that many of those savage warriors, disdaining the pleasures of a peaceable life, would retire to the northward, where the martial disposition of the Scots would better suit their inclination. The utmost efforts of valour, however, were not proof against the discipline of the Roman troops, and the experience of their commander. In the third year Agricola had penetrated as far as the river Tay; but the particulars of his progress are not recorded. The following year he built a line of forts between the friths of Forth and Clyde, to exclude the Caledonians from the southern parts of the island; and the year after, he subdued those parts which lay to the south and west of his forts, namely, the counties of Galloway, Cantyre, and Argyle, which at that time were inhabited by a people called *Gangi*, though some historians place these as far south as Cheshire in England, and the north part of Wales. This supposition, however, can scarcely be admitted, when we consider that Tacitus expressly informs us, that the people whom Agricola conquered had never before been known to the Romans.

Agricola still pursued the same prudent measures by which he had already secured the possession of such a large tract of country, that is, advancing but slowly, and building forts as he advanced, in order to keep the people in obedience. The Scots, though commanded

by their king, who is said to have been well acquainted with the manner of fighting and discipline of the Romans, were yet obliged to retreat; but at last, finding that the enemy made such progress as endangered the subjugation of the whole country, he resolved to cut off their communication with the southern parts, and likewise to prevent all possibility of a retreat by sea. Agricola, though solicited by some of his officers, refused to retreat; but divided his troops into three bodies, having a communication with each other. Upon this, Galgacus resolved to attack the weakest of the three, which consisted only of the ninth legion, and lay at that time, as is said, at a place called *Lochore*, about two miles from Loch-Leven in Fife. The attack was made in the night: and as the Romans were both unprepared and inferior in number, the Scots penetrated into the heart of their camp, and were making a great slaughter, when Agricola detached some light-armed troops to their assistance; by whom the Caledonians in their turn were routed, and forced to fly to the marshes and inaccessible places, where the enemy could not follow them.

This engagement has been magnified by the Roman historians into a victory, though it can scarce be admitted from the testimonies of other historians. The Romans, however, certainly advanced very considerably, and the Scots as constantly retreated, till they came to the foot of the Grampian mountains, where the Caledonians resolved to make their last stand. In the eighth year of the war, Agricola advanced to the foot of the mountains, where he found the enemy ready to receive him. Tacitus has given us a speech of Galgacus, which he has undoubtedly fabricated for him, in which he sets forth the aspiring disposition of the Romans, and encourages his countrymen to defend themselves vigorously, as knowing that every thing valuable was at stake. A desperate engagement accordingly ensued. In the beginning, the Britons had the advantage, by the dexterous management of their bucklers: but Agricola having ordered three Tungrian and two Batavian cohorts, armed with short swords, and embossed bucklers terminating in a point, to attack the Scots, who were armed with long swords, the latter soon found these weapons useless in a close encounter; and as their bucklers only covered a small part of their bodies, they were easily cut in pieces by their adversaries. The most forward of their cavalry and charioteers fell back upon their infantry, and disordered the centre: but, the Britons endeavouring to out-flank their enemies, the Roman general opposed them with his horse; and the Caledonians were at last routed with great slaughter, and forced to fly into the woods, whither the Romans pursued with so little caution, that numbers of them were cut off. Agricola, however, having ordered his troops to proceed more regularly, prevented the Scots from attacking and cutting off his men in separate parties, as they had expected; so that this victory proved the greatest stroke to the Caledonians that they had hitherto received. This battle is supposed by some to have been fought in Strathern, half a mile south from the kirk of Comrie; but others imagine the place to have been near Fortingal-Camp, a place somewhat farther on the other side of the Tay.

Great as this victory was, it seems not to have been pro-

Scotland.

8.
Great victory gained by the Romans.

⁸ Scotland productive of any solid or lasting advantage to the Romans; since we find that Agricola, instead of putting an end to the war by the immediate conquest of all Caledonia, retreated into the country of the Foresti, commonly supposed to be Forfarshire, though others imagine it to have been the county of Fife. Here he received hostages from part of the Caledonians; and ordered part of his fleet to sail round Britain, that they might discover whether it was an island or a continent. The Romans no sooner had left that part of the country, than the Caledonians demolished all the forts they had raised: and Agricola being soon after recalled by Domitian, the further progress of the Roman arms was stopped; Galgacus proving superior to any of the successors of that general.

⁹ Wall built
by Adrian.

From the time of Agricola to that of Adrian, we know little of the affairs of Scotland, excepting that during this interval the Scots must have entirely driven the Romans out of their country, and reconquered all that tract which lay between Agricola's chain of forts and Carlisle on the west, and Newcastle or Tinnmouth-Bar on the east; which Adrian, on visiting Britain, thought proper to fix as the northern boundary of the Roman dominions. Here he built a wall of turf between the mouth of the Tyne and the Solway frith, with a view to shut out the barbarians; which, however, did not answer the purpose, nor indeed could it be thought to do so, as it was only built of turf, and guarded by no more than 18,000 men, who could not be supposed a sufficient force to defend such an extent of fortification.

On the departure of Adrian, he left Julius Severus as his lieutenant: but this man, though one of the greatest commanders of his age, did not carry his arms to the northward of Adrian's wall; and this long interval of peace gave so much security to Mogold the Scottish monarch, that he degenerated into a tyrant, and was murdered by some of his noblemen. The only instance of his tyranny which is produced, however, is a law by which it was enacted, that the estates of such as were condemned should be forfeited to his exchequer, without any part thereof being allotted to their wives and children; an act which subsists almost in its full force to this day in Great Britain and the best regulated European governments.

In the reign of Antoninus Pius, the proprætor Lollius Urbicus drove the Scots far to the northward, and repaired the chain of forts built by Agricola, which lay between the Carron on the frith of Forth and Dunblair on the Clyde. These were joined together by turf walls, and formed a much better defence than the wall of Adrian. However, after the death of Antoninus, Commodus having recalled Calpurnius Agricola, an able commander, who kept the Scots in awe, a more dangerous war broke out than had ever been experienced by the Romans in that quarter. The Scots having passed the wall, put all the Romans they could meet with to the sword: but they were soon repulsed by Ulpius Marcellus, a general of consummate abilities, whom Commodus sent into the island.—In a short time the tyrant also recalled this able commander. After his departure, the Roman discipline in Britain suffered a total relaxation; the soldiery grew mutinous, and great disorders ensued: but these were all happily removed by the arrival of Clodius Albinus, a person

of great skill and experience in military affairs. His preference for some time restrained the Scots within proper bounds: but a civil war breaking out between him and Severus, Albinus crossed over to the continent with the greatest part of the Roman forces in Britain; and meeting his antagonist at Lyons, a dreadful battle ensued, in which Albinus was utterly defeated, and his army cut in pieces. See ROME, n° 375.

The absence of the Roman forces gave encouragement to the Scots to renew their depredations, which they did with such success, that the emperor became apprehensive of losing the whole island; on which he determined to go in person and quell these troublesome enemies. The army he collected upon this occasion was far more numerous than any the Romans had ever sent into Britain; and being commanded by such an able general as Severus, it may easily be supposed that the Scots must have been very hard pressed. The particulars of this important expedition are very imperfectly related; however, we are assured that Severus lost a vast number of men, it is said not less than 50,000, in his march through Scotland. Notwithstanding, he penetrated, it is said, to the most northern extremity of the island, and obliged the enemy to yield up their arms. On his return, he built a much stronger fortification to secure the frontiers against the enemy than had ever been done before, and which in some places coincided with Adrian's wall, but extended farther at each end. But in the mean time, the Scots, provoked by the brutality of the emperor's son Caracalla, whom he had left regent in his absence, again took arms: on which Severus himself took the field, with a design, as it would seem, to extirpate the whole nation; for he gave orders to his soldiers "not to spare even the child in the mother's belly." The event of his furious declaration is unknown: but in all probability the death of the emperor, which happened soon after, put a stop to the execution of this revenge; and it is certain that his son Caracalla, who succeeded Severus, ratified the peace with the Scots.

During all these important transactions, Scotland was governed by Donald I. who is said to have been the first Christian king of this country. From him to the time of Eugene I. no remarkable occurrence offers; but under the latter, the Roman and Pictish forces were united against the Scots. The Picts were commanded by their king, named *Hargulf*; and the Romans by Maximus, who murdered Valentinian III. and afterwards assumed the empire. The allies defeated Eugene in the county of Galloway; but Maximus being obliged to return southward on account of an insurrection, the Picts were in their turn defeated by the Scots. Next year, however, Maximus marched against the Scots; who being now reduced to extremity, brought into the field not only all the men capable of bearing arms, but the women also. In this engagement the Picts would have been utterly defeated, had not they been supported by the Romans; but Eugene being killed, with the greatest part of his nobility, the Scots were defeated; and so well did the conquerors improve their victory, that their antagonists were at last totally driven out of the country. Some of them took refuge in the *Æbudæ* islands, and some in Scandinavia and Ireland, from whence they made frequent descents upon Scotland. The Picts were at first mightily pleased with

¹⁰ Wars of Severus with the Scots.

¹¹ Expulsion of the Scots by Maximus. See ROME, n° 536.

Scotland. with the victory they had gained over their antagonists: but being commanded to adopt the laws of the Romans, and to choose no king who was not sent them from Rome, they began to repent of their having contributed to the expulsion of the Scots; and in the year 421, when Autulphus king of the Goths sent over a body of exiled Scots to Britain, under Fergus, a descendant of the royal family of Scotland, the Picts immediately joined them against the common enemy. The consequence of this was, that the Britons were pushed to the last extremity; and the Romans being obliged, on account of the inundation of northern barbarians who poured in upon them, to recal their forces from Britain, the inhabitants were reduced to the most miserable situation that can be imagined. In the time of Fergus II. they were obliged to give up all the country which lies to the north of Adrian's wall; and in the reign of Grimus or Graham, the successor of Fergus, they were obliged to write that remarkable letter to Rome, intitled, "The groans of the Britons &c." This, however, not being attended with success, the Britons were obliged to call in the Saxons to their assistance. By these new allies the Scots were defeated in a great battle, and their king (Eugene) drowned in the river Humber; which put a stop for some time to these incursions.

12
They re-
turn under
Fergus II.

† See Eng-
land, n^o 27.

Hitherto we have seen the Scots very formidable enemies to the southern Britons. But when the Saxons became the enemies of the Britons, the Scots joined in a strict alliance with the latter; and the famous king Arthur is said to have been assisted by the Scots in all his battles with the Saxons: neither does it appear that this league was ever dissolved again, though the united efforts of the Scots and Britons were not sufficient to preserve the independency of the latter.

13
War with
the Picts.

The next remarkable event in the history of Scotland is the war with the Picts, which took place in the ninth century. The occasion of the quarrel was, that Dongal king of Scotland pretended a right to the Pictish throne; which, however, was rejected by the Picts: upon which both parties had recourse to arms; but when every thing was ready for the campaign, Dongal was drowned in crossing the river Spey.

At this time the dominions of the Scots comprehended the western islands, together with the counties of Argyle, Knapdale, Kyle, Kintyre, Lochaber, and a part of Breadalbane; while the Picts possessed all the rest of Scotland, and part of Northumberland; so that the Picts seem to have been by much the most powerful people of the two. However, the Scots appear to have been superior in military skill; for Alpin, the successor of Dongal, having engaged the Pictish army near Forfar, after an obstinate engagement defeated them, and killed their king, though not without the loss of a great number of his own men. The Picts chose Brudus, the son of their former king, to succeed him; but soon after deposed and put him to death, on account of his stupidity and indolence. His brother Kenneth shared the same fate on account of his cowardice; till at last another Brudus, a brave and spirited prince, ascended the throne. Having raised a powerful army, he began with offering terms of peace to the Scots; which, however, Alpin rejected, and insisted upon a total surrender of his crown. Brudus on this endeavoured to procure the assistance of Edwin

king of Northumberland. Edwin accepted the money; but pretending to be engaged in other wars, he refused the assistance which he at first promised. Brudus, not dismayed by this disappointment, marched resolutely against his enemies; and the two armies came to an engagement near Dundee. The superior skill of the Scots in military affairs was about to have decided the victory in their favour, when Brudus bethought himself of the following stratagem to preserve his army from destruction. He caused all the attendants, and even the women who attended his army, to assemble and show themselves at a distance as a powerful reinforcement coming to the Picts. This struck the Scots with such a panic, that all the efforts of Alpin could not recover them; and they were accordingly defeated with great slaughter. Alpin himself was taken prisoner, and soon after beheaded by order of the conqueror. This execution happened at a place now called *Pit-alpy*, but in former times *Bas-alpin*, which in the Gaelic language signifies the *death of Alpin*. His head was afterwards stuck upon a pole, and exposed on a wall.

14
The Scots
defeated,
and their
king killed.

Alpin was succeeded by his son Kenneth II. who being a brave and enterprising prince, resolved to take a most severe revenge for his father's death. The Scots, however, were so dispirited by their late defeat, that they were exceedingly averse to any renewal of the war: while, on the other hand, the Picts were so much elated, that they made a law by which it became death for any man to propose peace with the Scots, whom they resolved to exterminate; and some of the nobility were expelled the council on account of their opposition to this law. The consequence of this was, that civil dissensions took place among them, and a bloody battle was fought between the opposite parties, before the Scots had thought of making any farther resistance.

By these distractions Brudus, who had in vain endeavoured to appease them, was so much affected, that he died of grief; and was succeeded by his brother Drusken.—The new prince also failed in his endeavours to accommodate the civil differences; so that the Scots, by gaining so much respite, at last began to recover from their consternation; and some of them having ventured into the Pictish territories, carried off Alpin's head from the capital of their dominions, supposed to have been Abernethy. In the mean time, Kenneth found means to gain over the nobility to his side by the following stratagem; which, however ridiculous, is not incredible, if we consider the barbarism and superstition of that age. Having invited them to an entertainment, the king introduced into the hall where they slept a person clothed in a robe made of the skins of fishes, which made such a luminous appearance in the dark, that he was mistaken for an angel or some supernatural messenger. To add to the terror of those who saw him, he denounced, through a speaking trumpet, the most terrible judgments, if war was not immediately declared against the Picts, the murderers of the late king. In consequence of this celestial admonition, war was immediately renewed with great vigour. The Picts were not deficient in their preparations, and had now procured some assistance from England. The first battle was fought near Stirling; where the Picts, being deserted by their English auxiliaries, were utterly defeated. Drusken escaped by the swift-

15
Stratagem
of Kenneth
to renew
the war.

ness

Scotland

ness of his horse, and a few days after made application to Kenneth for a cessation of hostilities; but as the Scottish monarch demanded a surrender of all the Pictish dominions, the treaty was instantly broken off. Kenneth pursued his good fortune, and conquered the counties of Merns, Angus, and Fife; but as he marched against Stirling, he received intelligence that these counties had again revolted, and cut off all the garrisons which he had left, and that Drusken was at the head of a considerable army in these parts. On this Kenneth hastened to oppose him, and a negotiation again took place. The result was equally unfavourable with the rest. Kenneth insisted on an absolute surrender of the counties of Fife, Merns, and Angus; which being refused, both parties prepared for a decisive battle. The engagement was very bloody and desperate, the Picts fighting like men in despair. Drusken renewed the battle seven times; but at last was entirely defeated and killed, and the counties in dispute became the immediate property of the conqueror.

Kenneth did not fail to improve his victory, by reducing the rest of the Pictish territories; which he is said to have done with the greatest cruelty, and even to have totally exterminated the inhabitants. The capital, called *Camelon*, (supposed to have been Abernethy), held out four months; but was at last taken by surprise, and every living creature destroyed. This was followed by the reduction of the Maiden Castle, now that of Edinburgh; which was abandoned by the garrison, who fled to Northumberland.

After the reduction of these important places, the rest of the country made no great resistance, and Kenneth became master of all the kingdom of Scotland in the present extent of the word; so that he is justly to be esteemed the true founder of the Scottish monarchy. Besides this war with the Picts, Kenneth is said to have been successful against the Saxons, though of these wars we have very little account. Having reigned 16 years in peace after his subjugation of the Picts, and composed a code of laws for the good of his people, Kenneth died of a fistula, at Fort Teviot, near Duplin in Perthshire. Before his time the seat of the Scots government had been in Argyleshire; but he removed it to Scone, by transferring thither the famous black stone supposed to be the palladium of Scotland, and which was afterwards carried off by Edward I. of England, and lodged in Westminster abbey.

Kenneth was succeeded by his brother Donald, who is represented as a man of the worst character; so that the remaining Picts who had fled out of Scotland were encouraged to apply to the Saxons for assistance, promising to make Scotland tributary to the Saxon power after it should be conquered. This proposal was accepted; and the confederates invaded Scotland with a powerful army, and took the town of Berwick; however, they were soon after defeated by Donald, who took also their ships and provisions. This capture proved their ruin; for some of the ships being laden with wine, the Scots indulged themselves so much with that liquor, that they became incapable of defending themselves; the consequence of this was, that the confederates rallying their troops, attacked them in that state of intoxication. The Scots were defeated with excessive slaughter. Twenty thousand of the common soldiers lay dead on the spot; the king and his prin-

pal nobility were taken prisoners; and all the country from the Tweed to the Forth became the property of the conquerors. Still, however, the confederates found themselves unable to pursue their victory farther; and a peace was concluded, on condition that the Saxons should become masters of all the conquered country. Thus the Forth and Clyde became the southern boundaries of the Scottish dominions. It was agreed that the Forth should from that time forward be called the *Scots Sea*; and it was made capital for any Scotsman to set his foot on English ground. They were to erect no forts near the English confines, to pay an annual tribute of a thousand pounds, and to give up 60 of the sons of their chief nobility as hostages. A mint was erected by the Saxon prince named *Osbreth*, at Stirling; and a cross raised on the bridge at that place, with the following inscription, implying that this place was the boundary between Scotland and England:

*Anglos a Scotis separat crux ista remotis:
Arma hic stant Bruti, stant Scoti sub hac cruce tuti.*

After the conclusion of this treaty, so humiliating to the Scots, the Picts, finding that their interest had been entirely neglected, fled to Norway, while those who remained in England were massacred. Donald shared the common fate of unfortunate princes, being dethroned and shut up in prison, where he at last put an end to his own life in the year 858. — In justice to this unhappy monarch, however, it must be observed, that the character of Donald, and indeed the whole account of these transactions, rests on the credit of a single author, namely Boece; and that other writers represent Donald as a hero, and successful in his wars: but the obscurity in which the whole of this period of Scottish history is involved, renders it impossible to determine any thing satisfactory concerning these matters.

Donald was succeeded by his nephew Constantine, the son of Kenneth Mac Alpin, in whose reign Scotland was first invaded by the Danes, who proved such formidable enemies to the English. This invasion is said to have been occasioned by some exiled Picts who fled to Denmark, where they prevailed upon the king of that country to send his two brothers, Hungar and Hubba, to recover the Pictish dominions from Constantine. These princes landed on the coast of Fife, where they committed the most horrid barbarities, not sparing even the ecclesiastics who had taken refuge in the island of May at the mouth of the Forth. Constantine defeated one of the Danish armies commanded by Hubba, near the water of Leven; but was himself defeated and taken prisoner by Hungar, who caused him to be beheaded at a place since called the *Devil's Cave*, in the year 874.

This unfortunate action cost the Scots 10,000 men: but the Danes seem not to have purchased their victory very easily, as they were obliged immediately afterwards to abandon their conquests, and retire to their own country. However, the many Danish monuments that are still to be seen in Fife, leave no room to doubt that many bloody scenes have been acted here between the Scots and Danes besides that above-mentioned.

Constantine was succeeded by his brother Eth, surnamed the *Swift-footed*, from his agility. Concerning him we find nothing memorable; indeed the accounts are so confused and contradictory, that it is impossible

Scotland

17
And by
the Danes

16
The Scots
defeated by
the Saxons

Scotland, to form any decisive opinion concerning the transactions of this reign. All agree, however, that it was but short; and that he was succeeded by Gregory the son of Dongal, contemporary with Alfred of England, and that both princes deservedly acquired the name of *Great*.
 18. The Danes at their departure had left the Picts in possession of Fife. Against them Gregory immediately marched, and quickly drove them into the north of England, where their confederates were already masters of Northumberland and York. In their way thither they threw a garrison into the town of Berwick; but this was presently reduced by Gregory, who put to the sword all the Danes, but spared the lives of the Picts. From Berwick, Gregory pursued the Danes into Northumberland, where he defeated them; and passed the winter in Berwick. He then marched against the Cumbrians, who being mostly Picts were in alliance with the Danes. Them he easily overcame, and obliged to yield up all the lands they had formerly possessed belonging to the Scots, at the same time that he agreed to protect them from the power of the Danes. In a short time, however, Constantine the king of the Cumbrians violated the convention he had made, and invaded Annandale; but was defeated and killed by Gregory near Lochmaben. After this victory Gregory entirely reduced the counties of Cumberland and Westmoreland, which, it is said, were ceded to him by Alfred the Great; and indeed the situation of Alfred's affairs at this time renders such a cession by no means improbable.

We next find Gregory engaged in a war with the Irish, to support Donach, an Irish prince, against two rebellious noblemen. The Irish were the first aggressors, and invaded Galloway; but being repulsed with great loss, Gregory went over to Ireland in person, where the two chieftains, who had been enemies to each other before, now joined their forces in order to oppose the common enemy. The first engagement proved fatal to one of their chiefs named *Brian*, who was killed with a great number of his followers. After this victory Gregory reduced Dundalk and Drogheda. On his way to Dublin he was opposed by a chieftain named *Cornel*, who shared the fate of his confederate, being also killed, and his army entirely defeated. Gregory then became guardian to the young prince whom he came to assist, appointed a regency, and obliged them to swear that they would never admit into the country either a Dane or an Englishman without his consent. Having then placed garrisons in the strongest fortresses, he returned to Scotland, where he built the city of Aberdeen; and died in the year 892, at his castle of Dundore in the Garioch.

19. Donald III. Gregory was succeeded by Donald III. the son of Constantine, who imitated the virtues of his predecessor. The Scots historians unanimously agree that Northumberland was at that time in the hands of their countrymen; while the English as unanimously affirm that it was subject to the Danes, who paid homage to Alfred. Be this as it will, however, Donald continued to live on good terms with the English monarch, and sent him a body of forces, who proved of considerable advantage to him in his wars with the Danes. The reign of Donald was but short; for having marched against some robbers (probably no other than the Danes) who had invaded and ravaged the counties of

Murray and Ross, he died at Forres soon after, having defeated and subdued them in the year 903. He was succeeded by Constantine III. the son of Eth the Swift-footed, concerning whom the most remarkable particular we find related is his entering into an alliance with the Danes against the English. The occasion of this confederacy is said to have been, that the English monarch, Edward the Elder, finding the Scots in possession of the northern counties of England, made such extravagant demands upon Constantine as obliged him to ally with the Danes in order to preserve his dominions in security. However, the league subsisted only for two years, after which the Danes found it more for their advantage to resume their ancient friendship with the English.

As soon as Constantine had concluded the treaty with the Danes, he appointed the presumptive heir to the Scottish crown, Malcolm, or, according to some, Eugene the son of the late king Donald, prince of the southern counties, on condition of his defending them against the attacks of the English. The young prince had soon an opportunity of exerting his valour: but not behaving with the requisite caution, he had the misfortune to be defeated, with the loss of almost all his army, he himself being carried wounded out of the field; and in consequence of this disaster, Constantine was obliged to do homage to Edward for the possessions he had to the southward of the Scots boundary.

In the beginning of the reign of Athelstan the son of Edward the Elder, the northern Danes were encouraged by some conspiracies formed against that monarch to throw off the yoke; and their success was such, that Athelstan thought proper to enter into a treaty with Sithric the Danish chief, and to give him his daughter in marriage. Sithric, however, did not long survive his nuptials; and his son Guthred, endeavouring to throw off the English yoke, was defeated, and obliged to fly into Scotland. This brought on a series of hostilities between the Scots and English, which in the year 938 issued in a general engagement. At this time the Scots, Irish, Cumbrians, and Danes, were confederated against the English. The Scots were commanded by their king Constantine, the Irish by Anlaf the brother of Guthred the Danish prince, the Cumbrians by their own sovereign, and the Danes by Froda. The generals of Athelstan were Edmund his brother, and Turketil his favourite. The English attacked the entrenchments of the confederates, where the chief resistance they met with was from the Scots. Constantine was in the utmost danger of being killed or taken prisoner, but was rescued by the bravery of his soldiers: however, after a most obstinate engagement, the confederates were defeated with such slaughter, that the slain are said to have been *innumerable*. The consequence of this victory was, that the Scots were deprived of all their possessions to the southward of the Forth; and Constantine, quite dispirited with his misfortune, resigned the crown to Malcolm, and retired to the monastery of the Culdees at St Andrew's, where he died five years after, in 943.

The distresses which the English sustained in their subsequent wars with the Danes gave the Scots an opportunity of retrieving their affairs; and in the year 944, we find Malcolm, the successor of Constantine, invested with the sovereignty of Northumberland, on condition

Scotland.
 20. Constantine III. enters into an alliance with the Danes against England.

21. Is utterly defeated by the English.

²² Scotland. dition of his holding it as fief of the crown of England, and assisting in defence of the northern border. Soon after the conclusion of this treaty Malcolm died, and was succeeded by his son Indulfus. In his reign the Danes became extremely formidable by their invasions, which they now renewed with greater fury than ever, being exasperated by the friendship subsisting between the Scots and English monarchs. Their first descent was upon East Lothian, where they were soon expelled, but crossed over to Fife. Here they were a second time defeated, and driven out; and so well had Indulfus taken care to guard the coasts, that they could not find an opportunity of landing; till having seemed to steer towards their own country, the Scots were thrown off their guard, and the Danes on a sudden made good their landing at Cullen, in Banffshire. Here Indulfus soon came up with them, attacked their camp, and drove them towards their ships, but was killed in an ambuscade, into which he fell during the pursuit. He was succeeded by Duffus, to whom historians give an excellent character; but, after a reign of five years, he was murdered, in the year 965. He was succeeded by Culen the son of Indulfus, who had been nominated prince of Cumberland in his father's lifetime, as heir-apparent to the throne. He is represented as a very degenerate prince; and is said to have given himself up to sensuality in a manner almost incredible, being guilty of incontinence not only with women of all ranks, but even with his own sisters and daughters. The people in the mean time were fleeced, in order to support the extravagance and luxury of their prince. In consequence of this, an assembly of the states was convened at Scone for the resettling of the government; but on his way thither Culen was assassinated, near the village of Methven, by Rohard, thane or sheriff of Fife, whose daughter the king had debauched.

²³ Kenneth III. a wife and valiant prince.

The provocations which Culen had given to his nobility seem to have rendered them totally untractable and licentious; which gave an occasion to a remarkable revolution in the reign of Kenneth III. who succeeded Culen. This prince, being a man of great resolution, began with relieving the common people from the oppressions of the nobility, which were now intolerable; and this plan he pursued with so much success, that, having nothing to fear from the great barons, he ordered them to appear before him at Lanerk; but the greatest part, conscious of their demerits, did not attend. The king so well dissembled his displeasure, that those who came were quite charmed with his affability, and the noble entertainment he gave them; in consequence of which, when an assembly was called next year, the guilty were encouraged to appear as well as the innocent. No sooner had this assembly met, however, than the place of meeting was beset with armed men. The king then informed them that none had any thing to apprehend excepting such as had been notorious offenders; and these he ordered to be immediately taken into custody, telling them, that their submitting to public justice must be the price of their liberty. They were obliged to accept the king's offer, and the criminals were accordingly punished according to their deserts.

About this time Edgar, king of England, finding himself hard pressed by the Danes, found means to unite the king of Scotland and the prince of Cumber-

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land along with himself in a treaty against the Danes; which gave occasion to a report that Kenneth had become tributary to the king of England. This, however, is utterly denied by all the Scots historians; who affirm that Kenneth cultivated a good correspondence with Edgar, as well because he expected assistance in defending his coasts, as because he intended entirely to alter the mode of succession to the throne. About this time the Danes made a dreadful invasion. Their original intention seems to have been to land on some part of the English coasts; but finding them probably too well guarded, they landed at Montrose in Scotland, committing every where the most dreadful ravages. Kenneth at that time was at Stirling, and quite unprepared; however, having collected an handful of troops, he cut off many of the enemy as they were straggling up and down, but could not prevent them from besieging Perth. Nevertheless, as the king's army constantly increased, he resolved to give the enemy battle. The scene of this action was at Loncarty, near Perth. The king is said to have offered ten pounds in silver, or the value of it in land, for the head of every Dane which should be brought him; and an immunity from all taxes to the soldiers who served in his army, provided they should be victorious: but, notwithstanding the utmost efforts of the Scots, their enemies fought so desperately, that Kenneth's army must have been totally defeated, had not the fugitives been stopped by a yeoman and his two sons of the name of *Hay*, who were coming up to the battle, armed with such rustic weapons as their condition in life afforded. Buchanan and Boece inform us, that these countrymen were ploughing in a field hard by the scene of action, and perceiving that their countrymen fled, they loosed their oxen, and made use of the yokes as weapons, with which they first obliged their countrymen to stand, and then annoyed their enemies. The fight was now renewed with such fury on the part of the Scots, that the Danes were utterly defeated; and, after the battle, the king rewarded Hay with the barony of Errol in the Carle of Gowrie, ennobled his family, and gave them an armorial bearing alluding to the rustic weapons with which they had achieved this glorious exploit.

²⁴ In the year 994, Kenneth was murdered at the instigation of a lady named *Fenella*, whose son he had caused to be put to death. The murder was perpetrated in Fenella's castle, where she had persuaded the king to pay her a visit. His attendants waited long near the place; but being at length tired out, they broke open the doors, and found their king murdered: upon which they laid the castle in ashes; but Fenella escaped by a postern. The throne was then seized by an usurper named *Constantine*; who, being killed in battle after a reign of a year and an half, was succeeded by Grime, the grandson of king Duffus; and he again was defeated and killed by Malcolm the son of Kenneth, the lawful heir of the Scottish throne. After this victory, however, Malcolm did not immediately assume the sovereignty; but asked the crown from the nobles, in consequence of a law passed in the reign of Kenneth, by which the succession to the throne of Scotland became hereditary. This they immediately granted, and Malcolm was accordingly crowned king. He joined himself in strict alliance with the king of England; and proved so successful against the Danes in England, that

4 Z

Sweno

²⁷ Scotland. Sweyn their king resolved to direct his whole force against him by an invasion of Scotland. His first attempt, however, proved very unsuccessful; all his soldiers being cut in pieces, except some few who escaped to their ships, while the loss of the Scots amounted to no more than 30 men. But in the mean time, Duncan, prince of Cumberland, having neglected to pay his homage to the king of England, the latter invaded that country in conjunction with the Danes. Malcolm took the field against them, and defeated both; but while he was thus employed in the south, a new army of Danes landed in the north at the mouth of the river Spey. Malcolm advanced against them with an army much inferior in number; and his men, neglecting every thing but the blind impulses of fury, were almost all cut to pieces; Malcolm himself being desperately wounded.

The Scots
defeated by
the Danes,

By this victory the Danes were so much elated, that they sent for their wives and children, intending to settle in this country. The castle of Nairn, at that time thought almost impregnable, fell into their hands; and the towns of Elgin and Forres were abandoned both by their garrisons and inhabitants. The Scots were everywhere treated as a conquered people, and employed in the most servile offices by the haughty conquerors; who, to render the castle of Nairn, as they thought, absolutely impregnable, cut through the small isthmus which joined it to the land. All this time, however, Malcolm was raising forces in the southern counties; and having at last got an army together, he came up with the Danes at Murtloch, near Balveny, which appears at this day to have been a strong Danish fortification. Here he attacked the enemy; but having the misfortune to lose three of his general officers, he was again obliged to retreat. However, the Danish general happening to be killed in the pursuit, the Scots were encouraged to renew the fight with such vigour, that they obtained at last a complete victory; but suffered so much, that they were unable to derive from it all the advantages which might otherwise have accrued.

²⁸ But defeat
them in a
second
battle.

On the news of this ill success, Sweyn ordered two fleets, one from England and another from Norway, to make a descent upon Scotland, under the command of Camus, one of his most renowned generals. The Danes attempted to land at the mouth of the Forth; but finding every place there well fortified, they were obliged to move farther northward, and effected their purpose at Redhead in the county of Angus. The castle of Brechin was first besieged; but meeting with a stout resistance there, they laid the town and church in ashes. From thence they advanced to the village of Panbride, and encamped at a place called *Karboddo*.

Malcolm in the mean time was at hand with his army, and encamped at a place called *Barr*, in the neighbourhood of which both parties prepared to decide the fate of Scotland; for as Moray and the northern provinces were already in the possession of the Danes, it was evident that a victory at this time must put them in possession of the whole. The engagement was desperate, and so bloody, that the rivulet which proceeds from Loch Tay is said to have had its water dyed with the blood of the slain; but at last the Danes gave way and fled. There was at that time in the army of Malcolm, a young prince of the name of *Keith* (A). He pursued Camus; and having overtaken him, engaged and killed him; but another Scots officer coming up at the same time, disputed with Keith the glory of the action. While the dispute lasted, Malcolm came up; who suffered them to decide it by single combat. In this second combat Keith proved also victorious, and killed his antagonist. The dying person confessed the justice of Keith's claim; and Malcolm dipping his finger in his blood marked the shield of Keith with three strokes, pronouncing the words *Veritas vincit*, "Truth overcomes," which has ever since been the armorial bearing and motto of the family of Keith (B).

²⁹ The Danes
again de-
feated.

³⁰ Rise of the
family of
Keith.

The shattered remains of the Danish forces reached their ships; but being driven back by contrary winds, and provisions becoming scarce, they put ashore 500 men on the coast of Buchan, to procure them some food: but their communication with the ships being soon cut off, they fortified themselves as well as they could, and made a desperate resistance; but at last were all put to the sword. The place where this massacre happened is still called *Crudane*; being probably an abbreviation of *Cruor Danorum*, the blood of the Danes, a name imposed on it by the ecclesiastics of those days.

Sweyn, not yet discouraged, sent his son Canute, afterwards king of England, and one of the greatest warriors of that age, into Scotland, with an army more powerful than any that had yet appeared. Canute landed in Buchan; and, as the Scots were much weakened by such a long continued war, Malcolm thought proper to act on the defensive. But the Scots, who now thought themselves invincible, demanded to be led on to a general engagement. Malcolm complied with their desire, and a battle ensued; in which though neither party had much reason to boast of victory, the Danes were so much reduced, that they willingly concluded a peace on the following terms, viz. That the Danes should immediately depart Scotland; that as long as Malcolm and Sweyn lived, neither of them should wage war with the other, or help each other's enemies; and

³¹ Another
invasion.

³² Peace con-
cluded.

(A) This prince is said to have commanded a colony of the Catti, a German nation who settled in the north-most part of Scotland, and from whom the county of Caithness takes its name.

(B) Mr Gordon, in his *Itinerarium Septentrionale*, observes, that in all probability the Scots gained two victories over the Danes on the present occasion; one near the place called *Karboddo*, already mentioned; and the other at *Aberlemno*, four miles from Brechin. At both places there are monuments with rude sculptures, erected most probably in memory of a victory. That at *Karboddo* is called *Camus's cross*; near which, somewhat more than a century ago, a large sepulchre, supposed to be that of Camus, was discovered. It consisted of four great stones; and had in it a huge skeleton, supposed to be that of the Danish prince. The fatal stroke seemed to have been given him on the back part of the head; a considerable portion of the skull being cut away, probably by the stroke of the sword.

Scotland. and that the field in which the battle was fought should be set apart and consecrated for the burial of the dead. These stipulations were punctually fulfilled by Malcolm, who built in the neighbourhood a chapel dedicated to Olaus, the tutelar saint of these northern nations.

33
Malcolm
assassinated.

After all these glorious exploits, and becoming the second legislator in the Scottish nation, Malcolm is said to have stained the latter part of his reign with avarice and oppression; in consequence of which he was murdered at the age of 80 years, after he had reigned above 30. This assassination was perpetrated when he was on his way to Glamis. His own domestics are said to have been privy to the murder, and to have fled along with the conspirators; but in passing the lake of Forfar on the ice, it gave way with them, and they were all drowned, their bodies being discovered some days after. The latter part of this account is confirmed by the sculptures upon some stones erected near the spot; one of which is still called *Malcolm's grave-stone*; and all of them exhibit some rude representations of the murder and the fate of the assassins.

34
Duncan I.

Malcolm was succeeded, in the year 1034, by his grandson Duncan I. but he is said to have had another grandson, the famous Macbeth; though some are of opinion that Macbeth was not the grandson of Malcolm, but of Fenella who murdered Kenneth III. The first years of Duncan's reign were passed in tranquillity, but domestic broils soon took place on the following occasion. Banquo, thane of Lochaber, and ancestor to the royal family of Stuart, acted then in the capacity of steward to Duncan, by collecting his rents; but being very rigid in the execution of his office, he was way-laid, robbed, and almost murdered. Of this outrage Banquo complained as soon as he recovered of his wounds and could appear at court. The robbers were summoned to surrender themselves to justice; but instead of obeying, they killed the messenger. Macbeth represented this in such strong terms, that he was sent with an army to reduce the insurgents, who had already destroyed many of the king's friends. This commission he performed with such success, that the rebel chief put an end to his own life; after which Macbeth sent his head to the king, and then proceeded with the utmost severity against the insurgents, who were composed of Irishmen, Islanders, and Highlanders.

35
A new in-
vasion by
the Danes.

This insurrection was scarcely quelled, when the Danes landed again in Fife; and Duncan put himself at the head of an army, having the thanes Macbeth and Banquo serving under him. The Danes were commanded by Sweyn king of Norway, and eldest son of Canute. He proceeded with all the barbarity natural to his nation, putting to death men, women, and children who fell in his way. A battle was fought between the two nations near Culrofs, in which the Scots were defeated: but the Danes purchased their victory so dearly, that they could not improve it; and Duncan retreated to Perth, while Macbeth was sent to raise more forces. In the mean time Sweyn laid siege to Perth, which was defended by Duncan and Banquo. The Danes were so much distressed for want of provisions, that they at last consented to treat of a peace, provided the pressing necessities of the army were relieved. The Scots historians inform us, that this treaty was set on foot in order to amuse Sweyn, and gain time for the

stratagem which Duncan was preparing. This was no other than a barbarous contrivance of infusing intoxicating herbs into the liquors that were sent along with the other provisions to the Danish camp. These soporifics had their intended effect; and while the Danes were under their influence, Macbeth and Banquo broke into their camp, where they put all to the sword, and it was with difficulty that some of Sweyn's attendants carried him on board; and we are told that his was the only ship of all the fleet that returned to Norway. It was not long, however, before a fresh body of Danes landed at Kinghorn in the county of Fife: but they were entirely defeated by Macbeth and Banquo. Such of the Danes as escaped fled to their ships; but before they departed they obtained leave to bury their dead in Inchcolm, a small island lying in the Forth, where one of their monuments is still to be seen.

Thus ended the formidable invasions of the Danes; after which Duncan applied himself to the administration of justice, and the reformation of the manners of his subjects. Macbeth, however, who had obtained great reputation by his success against the Danes, began to form ambitious designs, and to aspire to the crown itself. The fables relating to his usurpation are so well known from the tragedy composed by Shakespeare which bears the name of *Macbeth*, that we shall not take notice of them here; but only observe, that at last Duncan, not knowing he had so dangerous an enemy near his person, whose schemes required to be watched, was murdered at Inverness by Macbeth, who succeeded him in the throne.

36
Who are
defeated.
37
Duncan
murdered
by Mac-
beth, who
assumes the
throne.

During the greatest part of the reign of the usurper, Malcolm, the true heir to the crown of Scotland, kept close in his principality of Cumberland, without any thoughts of ascending his father's throne. Macbeth for some time governed with moderation, but at last became a tyrant. Becoming jealous of Banquo, the most powerful subject in his dominions, he invited him to an entertainment, and caused him to be treacherously murdered. His son Fleance was destined to the same fate, but escaped to Wales. After him Macduff, the thane of Fife, was the most powerful person in Scotland; for which reason, Macbeth determined to destroy him. On this Macduff fled to France; and Macbeth cruelly put to death his wife, and children who were yet infants, and sequestered his estate. Macduff vowed revenge, and encouraged Malcolm to attempt to dethrone the tyrant. Macbeth opposed them with his whole force; but being defeated in a pitched battle, he took refuge in the most inaccessible places of the Highlands, where he defended himself for two years; but in the mean time Malcolm was acknowledged king of Scotland, and crowned at Scone.

38
Macbeth
driven out.

The war between Macbeth and the new king continued for two years after the coronation of the latter; but at last he was killed in a fall by Macduff. However the public tranquillity did not end with his life. His followers elected one of his kinsmen named *Lullach*, surnamed the *Idiot*, to succeed him: but he not being able to withstand Malcolm, withdrew to the north, where being pursued, he was killed at Eslay in Strathbogie, after a reign of four months.

39
And killed.

Malcolm being now established on the throne, began with rewarding Macduff for his great services; and conferred upon his family four extraordinary privileges:

40
Malcolm
on the Scotch
throne.
1. That

Scotland.

1. That they should place the king in his chair of state at the coronation. 2. That they should lead the van of all the royal armies. 3. That they should have a regality within themselves: and, 4. That if any of Macduff's family should happen to kill a nobleman unpremeditatedly, he should pay 24 marks of silver, and, if a plebeian, 12. The king's next care was to reinstate in their fathers possessions all the children who had been disinherited by the late tyrant; which he did in a convention of his nobles held at Forfar. In the time of William the conqueror, we find Malcolm engaged in a dangerous war with England, the occasion of which was as follows. On the death of Edward the Confessor, Harold seized the throne of England, to the prejudice of Edgar Atheling the true heir to the crown. However, he created him earl of Oxford, and treated him with great respect; but on the defeat and death of Harold, William discovered some jealousy of Edgar. Soon after, William having occasion to pay a visit to his dominions in Normandy, he appointed Edgar to attend him, along with some other noblemen whom he suspected to be in his interest; but on his return to England, he found the people so much disaffected to his government, that he proceeded with great severity, which obliged great numbers of his subjects to take refuge in Cumberland and the southern parts of Malcolm's dominions. Edgar had two sisters, Margaret and Christina: these, with his two chief friends, Gospatric and Martefwin, soon made him sensible how precarious his life was under such a jealous tyrant, and persuaded him to make preparations for flying into Hungary or some foreign country. Edgar accordingly set sail with his mother Agatha, his two sisters, and a great train of Anglo-Saxon noblemen; but by stress of weather was forced into the frith of Forth, where the illustrious exiles landed at the place since that time called the *Queen's Ferry*. Malcolm no sooner heard of their landing than he paid them a visit in person; and at this visit he fell in love with the princess Margaret. In consequence of this, the chief of Edgar's party repaired to the court of Scotland. William soon made a formal demand of Edgar; and on Malcolm's refusal, declared war against him.

41
Entertains
Edgar and
English
prince.

42
War be-
tween Scot-
land and
England.

William was the most formidable enemy the Scots had ever encountered, as having not only the whole force of England, but of Normandy, at his command. However, as he had tyrannized most unmercifully over his English subjects, they were much more inclined to assist his enemies than their own prince; and he even found himself obliged to give up the county of Northumberland to Gospatric, who had followed Edgar, upon condition of his making war on the Scots. This nobleman accordingly invaded Cumberland; in return for which Malcolm ravaged Northumberland in a dreadful manner, carrying off an immense booty, and inviting at the same time the Irish and Danes to join him.

Even at this time the Danes kept up their claims upon the crown of England, so that they could not be supposed very zealous for the interest of Edgar. The Irish were also interested in advancing the cause of Harold's three sons, who had put themselves under their protection; and besides, their chief view seems to have been to obtain plunder at the expence of any party. However, as all these views tended to the pulling down of William's power, an union was formed against him,

but when they came to particular stipulations, the parties immediately disagreed. The three sons of Harold, with a body of Irish, made a descent upon Somersetshire, and defeated a body of English; but the Irish having thus obtained an opportunity of acquiring some booty, immediately retired with it, after having ravaged the country. The Danes landed at the mouth of the Humber from 40 small ships, where they were joined by Edgar and his party; and had the allies been unanimous, it is probable that William's government would have been overthrown.

Scotland.
43
England
invaded.

By this time William had taken from Gospatric the earldom of Northumberland, and given it to Robert Cummin one of his Norman barons; but the Northumbrians having joined Gospatric, and received the Danes as their countrymen, murdered Cummin and all his followers at Durham, where they had been guilty of great cruelties. After this they laid siege to the forts built by William in Yorkshire; but not being able to reduce them, the English, Scots, and Danes, united their forces, took the city of York itself, and put to the sword three thousand Normans who were there in garrison; and this success was followed by many incursions and ravages, in which the Danes and Northumbrians acquired great booty. It soon appeared, however, that these allies had the interest of Edgar no more at heart than the Irish; and that all the dependence of this forlorn prince was upon Malcolm, and the few Englishmen who had followed his fortune: for the booty was no sooner obtained, than the Danes retired to their ships, and the Northumbrians to their habitations, as though they had been in perfect safety. But in the mean time William, having raised a considerable army, advanced northwards. He first took a severe revenge upon the Northumbrians; then he reduced the city of York, and put to death all the inhabitants; and perceiving that danger was still threatened by the Danes, he bribed them with a sum of money to depart to their own country.

Malcolm was now left alone to encounter this formidable adversary; who, finding himself unable to oppose so great a force, withdrew to his own dominions, where he remained for some time upon the defensive, but not without making great preparations for invading England once more. His second invasion took place in the year 1071, while William was employed in quelling an insurrection in Wales. He is said at this time to have behaved with the greatest cruelty. He invaded England by Cumberland; ravaged Teesdale; and at a place called *Hundreds-keld*, he massacred some English noblemen, with all their followers. From thence he marched to Cleveland in the north-riding of Yorkshire; which he also ravaged with the utmost cruelty, sending back the booty with part of his army to Scotland: after which, he pillaged the bishopric of Durham, where he is said not to have spared the most sacred edifices, but to have burnt them to the ground. In the mean time Gospatric, to whom William had again ceded Northumberland, attempted to make diversion in his favour, by invading Cumberland: but being utterly defeated by Malcolm, he was obliged to shut himself up in Bamborough castle; while Malcolm returned in triumph with his army to Scotland, where he married the princess Margaret.

44
A second
invasion.

The next year William, having greatly augmented his

Scotland.
45
William
the Con-
queror in-
vades Scot-
land.

his army, invaded Scotland in his turn. The particulars of the war are unknown; but it certainly ended much to the disadvantage of the Scots, as Malcolm agreed to pay him homage. The English historians contend that this homage was for the whole of his dominions; but the Scots with more show of reason affirm, that it was only for those he possessed in England. On the conclusion of the peace, a cross was erected at Stanmore in Richmondshire, with the arms of both kings, to serve as a boundary between the possessions of William and the feudal dominions of Malcolm. Part of this monument, called *Re-cross*, or rather *Roy-cross*, or *The cross of the kings*, was entire in the days of Camden.

46
Reforma-
tion set on
foot by the
king and
queen of
Scotland.

This peace between Malcolm Canmore and William produced the greatest alteration in the manners of the Scots. What contributed chiefly to this was the excellent disposition of queen Margaret; who was, for that age, a pattern of piety and politeness: and next to this was the number of foreigners who had settled in Scotland; among whom were some Frenchmen, who laid the foundation of that friendship with the Scots which lasted for ages. Malcolm himself, also, though by his ravages in England he seems naturally to have been a barbarian, was far from being averse to a reformation, and even set the example himself. During her husband's absence in England queen Margaret had chosen for her confessor one Turgot, whom she also made her assistant in her intended reformation. She began with new-modelling her own court; into which she introduced the offices, furniture, and manner of living, common among the more polite nations of Europe. She dismissed from her service all those who were noted for immorality and impiety: and charged Turgot, on pain of her displeasure, to give his real sentiments on the state of the kingdom, after the best inquiry he could make. By him she was informed, that faction reigned among the nobles, rapine among the commons, and incontinence among all degrees of men. Above all, he complained that the kingdom was destitute of a learned clergy, capable of reforming the people by their example and doctrine. All this the queen represented to her husband, and prevailed upon him to set about the work of reformation immediately; in which, however, he met with considerable opposition. The Scots, accustomed to oppress their inferiors, thought all restrictions of their power were as many steps towards their slavery. The introduction of foreign offices and titles confirmed them in this opinion; and such a dangerous insurrection happened in Moray and some of the northern counties, that Malcolm was obliged to march against the rebels in person. He found them, indeed, very formidable; but they were so much intimidated by his resolution, that they intreated the clergy who were among them to intercede with the king in their favour. Malcolm received their submission, but refused to grant an unconditional pardon. He gave all the common people indeed leave to return to their habitations, but obliged the better sort to surrender themselves to his pleasure. Many of the most guilty were put to death, or condemned to perpetual imprisonment; while others had their estates confiscated. This severity checked the rebellious spirit of the Scots, upon which Malcolm returned to his plans of reformation. Still, however, he found himself opposed even in those abuses,

which were most obvious and glaring. He durst not entirely abolish that infamous practice of the landlord claiming the first night with his tenant's bride; though, by the queen's influence, the privilege was changed into the payment of a piece of money by the bridegroom, and was afterwards known by the name of *mercheta mulierum*, or "the woman's merk." In those days the Scots were without the practice of saying grace after meals, till it was introduced by Margaret, who gave a glass of wine, or other liquor, to those who remained at the royal table and heard the thanksgiving; which expedient gave rise to the term of the *grace-drink*. Besides this, the terms of the duration of Lent and Easter were fixed; the king and queen bestowed large alms on the poor, and the latter washed the feet of six of their number; many churches, monasteries, &c. were erected, and the clerical revenues augmented. However, notwithstanding these reformations, some historians have complained, that, along with the manners of the English and French, their luxuries were also introduced. Till this reign the Scots had been remarkable for their sobriety and the simplicity of their fare; which was now converted into excess and riot, and sometimes ended fatally by quarrels and bloodshed. We are told, at the same time, that even in those days, the nobility eat only two meals a-day, and were served with no more than two dishes at each meal; but that their deviation from their ancient temperance occasioned a diminution of the strength and size of the people.

47
In the year 1077, Malcolm again invaded England; but upon what provocation, or with what success, is again in-
not well known. But in 1088, after the death of the Conqueror, he again espoused the cause of Edgar Atheling, who had been reduced to implore his assistance a second time, when William Rufus ascended the throne of England. At the time of Edgar's arrival, Malcolm was at the head of a brave and well-disciplined army, with which he penetrated a great way into the country of the enemy; and, as it is said, returned to Scotland with an immense booty. Some historians tell us, that in this expedition Malcolm met with a defeat, which obliged him to return; and indeed this is not a little countenanced by others, who say, not indeed that he was defeated, but that it was *the will of God* he should proceed no farther. But, be this as it will, William resolved to revenge the injury, and prepared great armaments both by sea and land for the invasion of Scotland. His success, however, was not answerable to the greatness of his preparations. His fleet was dashed to pieces by storms, and almost all on board of it perished. Malcolm had also laid waste the country through which his antagonist was to pass, in such an effectual manner, that William lost a great part of his troops by fatigue and famine; and, when he arrived in Scotland, found himself in a situation very little able to resist Malcolm, who was advancing against him with a powerful army. In this distress, Rufus had recourse to Robert de Mowbray earl of Northumberland, who dissuaded him from venturing a battle, but advised him by all means to open a negociation by means of Edgar and the other English noblemen who resided with Malcolm. Edgar undertook the negociation, on condition of his being restored to his estates in England; but met with more difficulty than he imagined. Malcolm had never yet recognized the right of William Rufus to the throne
of

Scotland.

England
is again in-
vaded.

48
The Eng-
lish army
in great
danger.

Scotland. of England, and therefore refused to treat with him as a sovereign prince; but offered to enter into a negotiation with his brother Robert, surnamed *Curt-hose*, from the shortness of his legs. The two princes accordingly met; and Malcolm, having shown Robert the disposition of his army, offered to cut off his brother William, and to pay to him the homage he had been accustomed to pay to the Conqueror for his English dominions. But Robert generously answered, that he had resigned to Rufus his right of primogeniture in England; and that he had even become one of William's subjects, thereby accepting of an English estate. An interview with William then followed; in which it was agreed that the king of England should restore to Malcolm all his southern possessions, for which he should pay the same homage he had been accustomed to do to the Conqueror; that he should restore to Malcolm 12 disputed manors, and give him likewise 12 marks of gold yearly, besides restoring Edgar to all his English estates.

49
Peace con-
cluded.

This treaty was concluded in Lothian, according to the English historians; but at Leeds in Yorkshire, according to the Scots. However, the English monarch looked upon the terms to be so very dishonourable, that he resolved not to fulfil them. Soon after his departure Edgar and Robert began to press him to fulfil his engagements; but receiving only evasive answers, they passed over into Normandy. After their departure, William applied himself to the fortification of his northern boundaries, especially Carlisle, which had been destroyed by the Danes 200 years before. — As this place lay within the feudal dominions of Malcolm, he complained of William's proceeding, as a breach of the late treaty; and soon after repaired to the English court at Gloucester, that he might have a personal interview with the king of England, and obtain redress. On his arrival, William refused him admittance to his presence, without paying him homage. Malcolm offered this in the same manner as had been done by his predecessors, that is, on the confines of the two kingdoms; but this being rejected by William, Malcolm returned to Scotland in a rage, and prepared again for war.

50
Hostilities
 recommen-
ced.

51
Malcolm
killed at
the siege
of Alnwick
castle.

The first of Malcolm's military operations now proved fatal to him; but the circumstances of his death are variously related. According to the Scots historians, Malcolm having laid siege to Alnwick, and reduced the place to such straits, that a knight came out of the castle, having the keys on the point of a spear, and pretending that he designed to lay them at Malcolm's feet; but instead of this, he ran him through the eye with the spear, as soon as he came within reach. They add, that prince Edward, the king's eldest son, was mortally wounded in attempting to revenge his father's death. The English historians, on the other hand, contend, that the Scots were surprised in their camp, their army entirely defeated, and their king killed. On this occasion the Scots historians also inform us, that the family of Piercy received its name; the knight who killed the Scots king having been surnamed *Pierce-eye*, from the manner in which he gave that monarch the fatal stroke. Queen Margaret, who was at that time lying ill in the castle of Edinburgh, died four days after her husband.

After the death of Malcolm Canmore, which hap-

pened in the year 1093, the throne was usurped by his brother Donald Bane; who, notwithstanding the great virtues and glorious achievements of the late king, had been at the head of a strong party during the whole of his brother's reign. The usurper, giving way to the barbarous prejudices of himself and his countrymen, expelled out of the kingdom all the foreigners whom Malcolm had introduced, and obliged them to take refuge in England. Edgar himself had long resided at the English court, where he was in high reputation; and, by his interest there, found means to rescue his nephew young Edgar, the king of Scotland's eldest son, out of the hands of the usurper Donald Bane. The favour he showed to him, however, produced an accusation against himself, as if he designed to adopt young Edgar as his son, and set him up as a pretender to the English throne. This accusation was preferred by an Englishman whose name was *Orgar*; but, as no legal proofs of the guilt could be obtained, the custom of the times rendered a single combat between the parties unavoidable. Orgar was one of the strongest and most active men in the kingdom; but the age and infirmities of Edgar allowed him to be defended by another. For a long time none could be found who would enter the lists with this champion; but at last one Godwin of Winchester, whose family had been under obligations to Edgar or his ancestors, offered to defend his cause. Orgar was overcome and killed: and, when dying, confessed the falsehood of his accusation. The conqueror obtained all the lands of his adversary, and William lived ever afterwards on terms of the strictest friendship with Edgar.

Scotland.
The throne
usurped by
Donald
Bane.

53
A single
combat.

This combat, trifling as it may seem to us, produced very considerable effects. The party of Edgar and his brother's (who had likewise taken refuge at the English court) revived in Scotland, to such a degree, that Donald was obliged to call in the Danes and Norwegians to his assistance. In order to engage them more effectually to his interest, the usurper yielded up to them the Orkney and Shetland islands; but when his new allies came to his assistance, they behaved in such a manner as to become more intolerable to the Scots than ever the English had been. This discontent was greatly increased when it was found that William designed to place on the throne of Scotland a natural son of the late Malcolm, named *Duncan*, who had served in the English armies with great reputation. Donald attempted to maintain himself on the throne by the assistance of his Norwegian allies; but, being abandoned by the Scots, he was obliged to fly to the isles, in order to raise more forces; and in the mean time Duncan was crowned at Scone with the usual solemnity.

54
Donald
yields up
the Orkney
and Shet-
land islands
to the
Danes.

The Scots were now greatly distressed by two usurpers who contended for the kingdom, each of them supported by a foreign army. One of them, however, was soon dispatched. Malpedir, thane of Mearns, surprised Duncan in the castle of Mentieth, and killed him; after which he replaced Donald on the throne. The affection of the Scots, however, was by this time entirely alienated from Donald, and a manifest intention of calling in young Edgar was shown. To prevent this, Donald offered the young prince all that part of Scotland which lay to the southward of the Forth; but the terms were rejected, and the messengers who brought

Scotland.

55
Donald de-
posed by
Edgar.

brought them were put to death as traitors. The king of England also, dreading the neighbourhood of the Norwegians, interposed in young Edgar's favour, and gave Atheling the command of an army in order to restore his nephew. Donald prepared to oppose his enemies with all the forces he could raise; but was deserted by the Scots, and obliged to flee: his enemies pursued him so closely, that he was soon taken; and being brought before Edgar, he ordered his eyes to be put out, condemning him at the same time to perpetual banishment, in which he died some time after.

56
Forgeries
of the Eng-
lish histo-
rians.

The historians of these times inform us, that this revolution was owing to the interposition of St Cathbert, who appeared to Edgar, informing him that he should prove victorious, provided he repaired next day to his church, and received his banner from the hands of the canons; which he accordingly did, and proved ever afterwards a most grateful votary to his patron. During his reign a strict friendship subsisted between the courts of England and Scotland; owing to the marriage of Henry I. of England with the Princess Matilda, sister to Edgar. This has given occasion to the English historians to assert that Edgar held the kingdom of Scotland as a feudatory of Henry; and to this purpose have forged certain writings, by which Edgar acknowledges "That he held the kingdom of Scotland by gift from his Lord William king of England; and with consent of his said lord, he gives to Almighty God, and the church of Durham, and to the glorious bishop of St Cathbert, and to bishop William, and to the monks of Durham, and their successors, the manors of Berwick and Coldingham, with several other lands possessed by his father Malcolm: and this charter is granted in the presence of bishop William, and Turgot the prior; and confirmed by the crosses of Edgar his brother, and other noblemen." But that these writings are forged, appears from the non-existence of the original charter, and from their being related in quite a different manner by some other authors.—For the same purpose a seal has been forged of Edgar sitting on horseback, with a sword in his right-hand, and a shield on his left arm, within a border of France. But this last circumstance is a sufficient proof of the forgery; since, in the same repository in which this seal is kept, there are five charters of the same Edgar, which are undoubtedly genuine; and on the seals belonging to them he is represented sitting on two swords placed across, with a sceptre in one hand, a sword in the other, a royal diadem on his head, with this inscription round it, SCOTORUM BASILEUS, which the best English antiquaries allow to have been a title denoting independency.

57
Alexander
I.

After a reign of nine years, Edgar died at Dundee, in the year 1107; and was succeeded by his brother Alexander I. surnamed the *Fierce* from the impetuosity of his temper. On his accession to the throne, however, the Scots were so ignorant of his true character, on account of his appearance of piety and devotion, that the northern parts of the kingdom were soon filled with ravages and bloodshed, by reason of the wars of the chieftains with each other. Alexander immediately raised an army, and marching into Moray and Ross-shire, attacked the insurgents separately; and having subdued them all, he put great numbers of them to death. He then set himself to reduce the exorbitant power of the nobles, and to deliver the common people

58
Admini-
sters justice
rigidly.

from the oppression under which they groaned. A remarkable instance of this appeared on his return from the expedition just now mentioned. In passing through the Mearns, he met with a widow, who complained that her husband and son had been put to death by the young earl their superior. Alexander immediately alighted from his horse, and swore that he would not remount him till he had inquired into the justice of the complaint; and, finding it to be true, the offender was hanged on the spot. These vigorous proceedings prevented all attempts at open rebellion; but produced many conspiracies among the profligate part of his private subjects, who had been accustomed to live under a more remiss government. The most remarkable of these took place while the king was engaged in building the castle of Baledgar, so called in memory of his brother Edgar, who had laid the foundation-stone. It was situated in the Carse of Gowrie, which, we are told, had formerly belonged to Donald Bane, but afterwards came to the crown, either by donation or forfeiture. The conspirators bribed one of the king's chamberlains to introduce them at night into the royal bed-chamber: but Alexander, alarmed at the noise, drew his sword, and killed six of them; after which, by the help of a knight named *Alexander Carron*, he escaped the danger, by fleeing into Fife. The conspirators chiefly resided in the Mearns, to which Alexander once more repaired at the head of an army; but the rebels retreated northwards, and crossed the Spey. The king pursued them across that river, defeated them, and brought to justice all that fell into his hands. In this battle, Carron distinguished himself so eminently, that he obtained the name of *Skringeour* or *Skrimzeour*; which indeed is no other than the English word *skirmisher* or *fighter*.

Scotland.

59
Narrowly
escapes
assassins.

The next remarkable transaction of Alexander's reign, as recorded by the English historians, was his journey into England, where he paid a visit to Henry I. whom he found engaged in a war with the Welsh. The occasion of it was this: Henry had planted a colony of Flemings on the borders of Wales, in order to keep that turbulent people in awe, as well as to introduce into his kingdom the manufactures for which the Flemings were famous. The Welsh, jealous of this growing colony, invaded England; where they defeated the earl of Chester and Gilbert Strongbow, the two most powerful of the English subjects. Alexander, in virtue of the fealty which he had sworn for his English possessions, readily agreed to lead an army into Wales. There he defeated one of the chieftains, and reduced him to great straits; but could not prevent him from escaping to Griffith prince of North Wales, with whom he was closely allied. Henry also marched against the enemy, but with much worse success in the field than Alexander; for he lost two-thirds of his army, with almost his whole baggage, by fatigue, famine, and the attacks of the Welsh. This loss, however, he made up in some measure by his policy; for having found means to raise a jealousy between the two Welsh chiefs, he induced them to conclude a peace, but not without restoring all his lands to the one, and paying a considerable sum of money to the other. Alexander died in 1124, after a reign of seventeen years; and was buried at Dunfermline.

60
His exploits
in England.

This prince, dying a bachelor, was succeeded by his younger brother David; who interfered in the affairs of England.

61
Wars of
with the
of English.

Scotland.

of England, and took part with the empress Maud in the civil war she carried on with Stephen. In 1136, David met his antagonist at Durham; but as neither party cared to venture an engagement, a negotiation took place, and a treaty was concluded. This, however, was observed but for a short time; for, in the following year, David again invaded England, on some frivolous pretences. He defeated Stephen at Roxburgh; and forced him to retreat precipitately, after losing one half of his army. Next year he renewed his invasion; and, though he himself was a man of great mildness and humanity, he suffered his troops to commit such outrages, as firmly united the English in opposition to him. His grand-nephew William cut in pieces the vanguard of the English army at Clithero; after which he ravaged the country with such cruelty, that the inhabitants became exasperated beyond measure against him. New associations were entered into against the Scots; and the English army receiving great reinforcements from the southward, advanced to Northallerton, where the famous standard was produced. The body of this standard was a kind of box which moved upon wheels, from which arose the mast of a ship surmounted by a silver cross, and round it were hung the banners of St Peter, St John de Beverly, and St Wilfred. Standards of this kind were common at that time on the continent of Europe; and so great confidence had the English in this standard, that they now thought themselves invincible. They had, however, a much more solid ground of confidence, as being much better armed than their antagonists. The armies met at a place called *Culton Moor*. The first line of the Scots army was composed of the inhabitants of Galloway, Carric, Kyle, Cunningham, and Renfrew. These by some historians are called *Picts*, and are said to have had a prince of their own, who was a feudatory to David. The second line consisted of the Lothian men, by which we are to understand the king's subjects in England as well as the south of Scotland, together with the English and Normans of Maud's party. The third line was formed of the clans under their different chieftains; but who were subject to no regular command, and were always impatient to return to their own country when they had acquired any booty. The English soldiers having ranged themselves round their standard, dismounted from their horses, in order to avoid the long lances which the first line of the Scots army carried. Their front-line was intermixed with archers; and a body of cavalry, ready for pursuit, hovered at some distance. The Picts, besides their lances, made use of targets; but, when the English closed with them, they were soon disordered and driven back upon the centre, where David commanded in person. His son made a gallant resistance, but was at last forced to yield: the last line seems never to have been engaged. David, seeing the victory decided against him, ordered some of his men to save themselves by throwing away their badges, which it seems Maud's party had worn, and mingling with the English; after which he himself, with his shattered forces, retreated towards Carlisle. The English historians say, that in this battle the Scots were totally defeated, with the loss of 10,000 men; but this seems not to be the case, as the English did not pursue, and the Scots were in a condition for carrying on the war next year. However, there were now no great ex-

62
Battle of
the Stan-
dard.

63
The Scots
entirely de-
feated.

plots performed on either side; and a peace was concluded, by which Henry prince of Scotland was put in possession of Huntingdon and Northumberland, and took an oath of fealty to Stephen. David continued faithful to his niece the empress as long as he lived; and died at Carlisle in the year 1153, after a glorious reign of somewhat more than 29 years.

David was succeeded by his grandson Malcolm IV. surnamed the *Maiden*, on account of his continence. He appears to have been a weak and superstitious prince, and died of a depression of spirits in the year 1165. He was succeeded by his brother William I. who immediately entered into a war with Henry II. of England, on account of the earldom of Northumberland, which had been given up by Malcolm; but Henry, finding his affairs in a very embarrassed situation, consented to yield up this county, on William's paying him homage, rather than continue the miseries of war. In 1172, he attempted to avail himself of the unnatural war which Henry's sons carried on against their father, and invaded England. He divided his army into three columns: the first of which laid siege to Carlisle; the second he himself led into Northumberland; and the king's brother, David, advanced with the third into Leicestershire. William reduced the castles of Burgh, Appleby, Warkworth, and Garby; and then joined that division of his army which was besieging Carlisle. The place was already reduced to such straits, that the governor had agreed to surrender it by a certain day, provided it was not relieved before that time: on which the king, leaving some troops to continue the siege, invested a castle with some of the forces he had under his command, at the same time sending a strong reinforcement to his brother David; by which means he himself was left with a very small army, when he received intelligence that a strong body of English under Robert de Stuteville and his son were advancing to surprise him.—William, sensible of his inability to resist them, retired to Alnwick, to which he instantly laid siege; but in the mean time acted in such a careless and unthinking manner, that his enemies actually effected their designs. Having dressed a party of their soldiers in Scots habits, they took the king himself prisoner, and carried him, with his feet tied under the belly of a horse, to Richmond Castle. He was then carried in chains before Henry to Northampton, and ordered to be transported to the castle of Falaise in Normandy, where he was shut up with other state prisoners. Soon after this an accommodation took place between Henry and his sons, and the prisoners on both sides were set at liberty, William only excepted, who bore his confinement with great impatience. Of this Henry took the advantage, to make him pay homage for the whole kingdom of Scotland, and acknowledge that he held it only as a feu of the crown of England; and, as a security, he was obliged to deliver into the hands of Henry all the principal forts in Scotland, viz. the castles of Roxburgh, Berwick, Jedburgh, Edinburgh, and Stirling; William at the same time agreeing to pay the English garrisons which were put into these castles. David, the king's brother, with 20 barons, who were present at the signing of this shameful convention, were put into the hands of Henry as hostages for William's good faith; after which the king was set at liberty, and returned to Scotland.

Scotland.

64
William I.
engages in
a war with
Henry II.
of England.

65
He is taken
prisoner by
the English,
and obliged
to do ho-
mage for
his king-
dom.

The

Scotland.

The affairs of Scotland were now in the greatest confusion. The people of Galloway, at the head of whom were two noblemen or princes called *Othred* and *Gilbert*, had taken the opportunity of asserting their independency on the crown of Scotland; and, having expelled all the Scots officers out of the country, they demolished all the forts which William had erected in their country, and put to death all the foreigners. But in the mean time a quarrel ensuing between the two chiefs, *Othred* was murdered by *Gilbert*, who immediately applied to Henry for protection.

Henry, in order to give all possible sanction to the convention betwixt him and William, summoned him to meet him and his son at York. William obeyed the summons, and along with him appeared all the great nobility and landholders; who confirmed the convention of Falaise, swore fealty to Henry, and put themselves and their country under his protection. In the mean time, *Gilbert*, who was at the head of the rebels in Galloway, had offered to put himself and his people under the protection of the king of England, and to pay to Henry 2000 merks of silver yearly, with 500 cows and as many hogs, by way of tribute: however, Henry, that he might oblige his new feudatory William, refused to have any concern in the affair. On this, William ordered his general *Gilchrist* to march against him; which he did with such success, that *Gilbert* was entirely defeated, and Galloway again reduced under the dominion of Scotland. Very soon after this victory, *Gilchrist* fell under the king's displeasure on

66
Adventures
of Wil-
liam's ge-
neral, *Gil-
christ*.

the following occasion. He had married *Matilda*, sister to William; and on suspicion, or proof, of her incontinence, put her to death at a village called *Maynes*, near Dundee. The king being highly displeased at such a gross affront to himself, summoned *Gilchrist* to take his trial for the murder: but as the general did not choose to make his appearance, his estates were confiscated, his castles demolished, and he himself banished. He took refuge in England; but as it had been agreed in the convention between William and Henry that the one should not harbour the traitorous subjects of the other, *Gilchrist* was forced to return to Scotland with his two sons. There they were exposed to all the miseries of indigence, and in perpetual fear of being discovered, so that they were obliged to skulk from place to place. William, on his return from an expedition against an usurper whom he had defeated, happened to observe three strangers, who, though disguised like rustics, appeared by their noble mien to be above the vulgar rank. William, who first discovered them, was confirmed in this apprehension, by seeing them strike out of the high road, and endeavour to avoid notice. He ordered them to be seized and brought before him. The oldest, who was *Gilchrist* himself, fell upon his knees before him, and gave such a detail of his misfortunes as drew tears from the eyes of all present; and the king restored him to his former honours and estates. From the family of this *Gilchrist* that of the *Ogilvies* is said to be descended.

67
Origine of
the family
of *Ogilvy*.

The Scots continued to be in subjection to the English until the accession of Richard I. This monarch being a man of romantic valour, zealously undertook an expedition into the Holy Land against the Turks, according to the superstition of the times. That he

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might secure the quiet of his dominions in his absence, he determined to make the king of Scotland his friend; and for this purpose, he thought nothing could be more acceptable than releasing him and his subjects from that subjection which even the English themselves considered as forced and unjust. However, he determined not to lose this opportunity of supplying himself with a sum of money, which could not but be absolutely necessary in such an expensive and dangerous undertaking. He therefore made William pay him 10,000 merks for this release: after which he entered into a convention, which is still extant; and in this he acknowledges, that "all the conventions and acts of submission from William to the crown of England had been extorted from him by unprecedented writings and duress." This transaction happened in the year 1189.

The generosity of Richard met with a grateful return from William; for when Richard was imprisoned by the emperor of Germany in his return from the Holy Land, the king of Scotland sent an army to assist his regency against his rebellious brother John, who had wickedly usurped the throne of England. For this Richard owed his obligation in the highest degree; but William afterwards made this an handle for such high demands as could not be complied with. Nevertheless, the two monarchs continued in friendship as long as Richard lived. Some differences happened with King John about the possession of Northumberland and other northern counties: but these were all finally adjusted to the mutual satisfaction of both parties; and William continued a faithful ally of the English monarch till his death, which happened in the year 1214, after a reign of 49 years.

William was succeeded by his son Alexander II. a youth of 16. He revived his claim to Northumberland and the other northern counties of England; but John, supposing that he had now thoroughly subdued the English, not only refused to consider the demands of Alexander, but made preparations for invading Scotland. John had given all the country between Scotland and the river Tees to *Hugh de Baliol* and another nobleman, upon condition of their defending it against the Scots. Alexander fell upon Northumberland, which he easily reduced, while John invaded Scotland. Alexander retired to Melros, in order to defend his own country; upon which John burnt the towns of Wark, Alnwick, and Morpeth, and took the strong castles of Roxburgh and Berwick. He next plundered the abbey of Coldingham, reduced Dunbar and Haddington, ravaging the country as he passed along. His next operation was directed against Edinburgh; but being opposed by Alexander at the head of an army, he precipitately marched back. Alexander did not fail to pursue; and John, to cover his retreat, burnt the towns of Berwick and Coldingham. In this retreat the king of England himself set his men an example of barbarity, by setting fire every morning to the house in which he had lodged the preceding night. In short, such desolation did John spread all around him, that Alexander found it impossible to continue his pursuit; for which reason he marched westward, and invaded England by the way of Carlisle. This place he took and fortified; after which he marched south as far as Richmond, receiving homage from all the great barons as he went along.

5 A

along

Scotland

along. At Richmond he was again stopped by John's ravages, and obliged to return through Westmoreland to his own dominions.

When the English barons found it necessary to put themselves under the protection of Louis, son to the king of France, that prince, among other acts of sovereignty, summoned Alexander to do him homage; but the latter being then engaged in the siege of Carlisle, which had fallen into the hands of King John, he could not immediately attend. In a short time Alexander found himself obliged to abandon this enterprise: after which he laid siege to Barnard-castle; but being baffled here also, marched southwards through the whole kingdom of England, and met Louis at London or Dover, where the prince confirmed to him the rights to Northumberland, Cumberland, and Westmoreland. He continued a faithful ally to Louis and the barons in their wars with John; and, in 1216, brought a fresh army to their assistance, when their affairs were almost desperate. This once more turned the scale against John; but he soon after dying, the English easily became reconciled to the government of Henry III. and the party of Louis dwindled every day, till at last he was obliged to drop all thoughts of being king of England.

As long as Louis continued in England, Alexander proved faithful to his interest; but, in 1217, he was on such good terms with Henry as to demand his eldest sister, the Princess Joan, for a wife. His request was granted, and in 1221 he espoused the princess; while his eldest sister Margery was married to Hubert de Burgh justiciary of England, and his second sister to Gilbert earl Marshal, the two greatest subjects in England.

As long as the queen of Scotland lived, a perfect harmony subsisted between the Scots and English: but in 1239 Queen Joan died without children; and Alexander soon after married Mary, the daughter of Egelrand de Coucy, a young and beautiful French lady, by whom he had a son named *Alexander*, in 1241. From this time a coolness took place between the two courts, and many differences arose; but no hostilities were commenced on either side during the lifetime of Alexander, who died in 1249 in the 35th year of his reign.

72
Alexander III.

Immediately after the death of his father, Alexander III. took possession of the throne. He is the first of the Scots kings of whose coronation we have any particular account. We are told, that the ceremony was performed by the bishop of St Andrew's, who girded the king with a military belt, probably as an emblem of his temporal jurisdiction. He then explained in Latin, and afterwards in Gaelic, the laws and oaths relating to the king; who agreed to and received them all with great appearance of joy, as he also did the benediction and ceremony of coronation from the same prelate. After the ceremony was performed, a Highlander, probably one of those who went under the denomination of *Sannachies*, repeated on his knees before the throne, in his own language, the genealogy of Alexander and his ancestors, up to the first king of Scotland.

73
Marries the daughter of Henry III. of England.

In 1250, the king, though no more than ten years of age, was married to the daughter of Henry, who now thought it a proper opportunity to cause him do homage for the whole kingdom of Scotland. But A-

lexander, notwithstanding his youth, replied with great sense and modesty, that his business in England was matrimony; that he had come thither under Henry's protection and invitation; and that he was no way prepared to answer such a difficult question.

Henry seems to have been encouraged to make this attempt by the distracted state of the Scots affairs at that time; for, during the minority of the king, the nobility threw every thing into confusion by their dissensions with one another. The family of Cummin were now become exceedingly powerful; and Alexander II. is blamed by Buchanan for allowing them to obtain such an exorbitant degree of power, by which they were enabled almost to shake the foundation of government. Notwithstanding the king's refusal to submit to the homage required of him, they imagined that Henry's influence was now too great; and fearing bad consequences to themselves, they withdrew from York, leaving Henry in full possession of his son-in-law's person. Henry, however, to show that he deserved all the confidence which could be reposed in him, publicly declared, that he dropped all claim of superiority with regard to the crown of Scotland, and that he would ever afterwards act as the father and guardian of his son-in-law; confirming his assurances by a charter. Yet when Alexander returned to Scotland, he found they had made a strong party against his English connections. They now exclaimed, that Scotland was no better than a province of England; and having gained almost all the nobility over to this opinion, they kept the king and queen as two state-prisoners in the castle of Edinburgh. Henry had secret intelligence of these proceedings; and his queen privately sent a physician whom she could trust, to inquire into her daughter's situation. Having found means of being admitted into the young queen's presence, she gave him a most lamentable account of her situation. She said, that the place of their confinement was very unwholesome, in consequence of which their health was in imminent danger; and that they had no concern in the affairs of government. Historians do not inform us by what means they were reduced to this dismal situation; only in general, that the Cummins usurped the whole power of the state. Henry did not well know how to act. If he proceeded at once to violent measures, he was afraid of the lives of his daughter and son-in-law; and, on the other hand, by a more cautious conduct, he left them exposed to the wicked attempts of those who kept them in thraldom, some of whom, he very well knew, had designs on the crown itself. By advice of the Scots royalists, among whom were the earls of Dunbar, Fife, Strath-
74
They are set at liberty by Henry.

erne, Carric, and Robert de Bruce, Henry assembled his military tenants at York, from whence he himself advanced to Newcastle, where he published a manifesto, disclaiming all designs against the peace or independency of Scotland; declaring, that the forces which had been collected at York were designed to maintain both; and that all he meant was to have an interview with the king and queen upon the borders. From Newcastle he proceeded to Wark, where he privately dispatched the Earl of Gloucester, with his favourite John Mansel, and a train of trusty followers, to gain admission into the castle of Edinburgh, which was then held by John Baliol and Robert de Ros, noblemen of great influence both in England and Scotland. The Earl and Mansel gained

Scotland

Scotland. gained admittance into the castle in disguise, on pretence of their being tenants to Baliol and Rofs; and their followers obtained access on the same account, without any suspicion, till they were sufficiently numerous to have mastered the garrison, had they met with any resistance. The queen immediately informed them of the thralldom and tyranny in which she had been kept; and among other things declared, that she was still a virgin, as her jailors obliged her to keep separate from her husband. The English, being masters of the castle, ordered a bed to be prepared that very night for the king and queen; and Henry, hearing of the success of his party, sent a safe-conduct for the royal pair to meet him at Alnwick. Robert de Rofs was summoned by Henry to answer for his conduct; but throwing himself at the king's feet, he was punished only by the sequestration of his estate, as was John Baliol by a heavy fine, which the king of England reserved entirely to his own use.

75 Alexander carried off by rebels, but relieved. Alexander and his queen were attended to Alnwick by the heads of their party; and when they arrived, it was agreed that Henry should act as his son-in-law's guardian; in consequence of which, several regulations were made in order to suppress the exorbitant power of the Cummins. That ambitious family, however, were all this time privately strengthening their party in Scotland, though they outwardly appeared satisfied with the arrangements which had been made. This rendered Alexander secure; so that, being off his guard, he was surprised when asleep in the castle of Kinross by the earl of Menteith, who carried him to Stirling. The Cummins were joined in this treason by Sir Hugh de Abernethy, Sir David Lochore, and Sir Hugh de Barclay; and, in the mean time, the whole nation was thrown into the utmost confusion. The great seal was forcibly taken from Robert Stuterville, substitute to the chancellor the bishop of Dunkeld; the estates of the royalists were plundered; and even the churches were not spared. The king at last was delivered by the death of the earl of Menteith, who is said to have been poisoned by his wife, in order to gratify her passion for a young English gentleman named *John Russell*. This charge, however, was never proved; but it is certain that the earl died at a juncture very critical for Scotland, and that his death disconcerted all the schemes of his party, which never afterwards could make head against the royalists.

Alexander being thus restored to the exercise of regal authority, acted with great wisdom and moderation. He pardoned the Cummins and their adherents, upon their submitting to his authority; after which, he applied himself to the regulation of his other affairs: but a storm was now ready to break upon him from another quarter. We have already seen, that the usurper Donald Bane, brother to Malcom Canmore, had engaged to deliver up the isles of Orkney and Shetland to the king of Norway, for assisting him in making good his pretensions to the crown of Scotland. Haquin, the king of Norway, at this time alleged, that these engagements extended to the delivering up the islands of Bute, Arran, and others in the Frith of Clyde, as belonging to the Ebudæ or Western isles; and as Alexander did not think proper to comply with these demands, the Norwegian monarch appeared with a fleet of 160 sail, having on board 20,000 troops,

who landed and took the castle of Air. Alexander immediately dispatched ambassadors to enter into a treaty with Haquin; but the latter, flushed with success, would hearken to no terms. He made himself master of the isles of Bute and Arran; after which he passed over to Cunningham. Alexander, prepared to oppose him, divided his army into three bodies. The first was commanded by Alexander high steward of Scotland (the great grandfather of Robert II.), and consisted of the Argyle, Athol, Lenox, and Galloway men. The second was composed of the inhabitants of Lothian, Fife, Merse, Berwick, and Stirling, under the command of Patrick earl of Dunbar. The king himself led the centre, which consisted of the inhabitants of Perthshire, Angus, Mearns, and the northern counties.—Haquin, who was an excellent commander, disposed his men in order of battle, and the engagement began at a place called *Largs*. Both parties fought with great resolution; but at last the Norwegians were defeated with dreadful slaughter, no fewer than 16,000 of them being killed on the spot. The remainder escaped to their ships; which were so completely wrecked the day after, that Haquin could scarce find a vessel to carry him with a few friends to Orkney, where he soon after died of grief.

In consequence of this victory, Owen or John king of the island of Man submitted to Alexander; and his example was followed by several other princes of the islands belonging to the Norwegians. Haquin's son, Magnus, a wise and learned prince, soon after arrived in Scotland with fresh reinforcements, and proposed a treaty: but Alexander, instead of listening to an accommodation, sent the earls of Buchan and Murray, with Allen the chamberlain, and a considerable body of men, to the western islands, where they put to the sword some of the inhabitants, and hanged their chiefs for having encouraged the Norwegian invasion. In the mean time, Magnus returned to Norway; where a treaty was at last concluded between him and Alexander. By this Magnus renounced all right to the contested islands; Alexander at the same time consenting to pay him 1000 merks of silver in the space of two years, and 100 yearly ever after, as an acknowledgment for these islands. To cement the friendship more firmly, a marriage was concluded between Margaret the daughter of Alexander, and Eric the son and heir of Magnus, who was also a child; and, some years after, when the parties were of proper age, the marriage was consummated.

From this time to the accession of Edward I. of England, we find nothing remarkable in the history of Scotland. That prince, however, proved a more cruel enemy to this country than it had ever experienced. Alexander was present at the coronation of Edward, who was then newly arrived from the Holy Land, where he had been on a crusade. Soon after this Alexander paid him homage for his English estates; particularly for the lands and lordship of Penrith and others, which Henry had given him along with his daughter. He proved an excellent ally to Edward in his wars against the French; and the latter passed a charter, by which he acknowledged that the services of the king of Scotland in those wars were not in consequence of his holding lands in England, but as an ally to his crown. Even at this time, however, Edward

Scotland.

76 Defeats the Norwegians.

77 Regains the islands of Shetland, Orkney, &c.

Scotland.
—
73
Delights of
Edward I.
against the
liberties of
Scotland.

had formed a design on the liberties of that kingdom; for in the charter just mentioned, he inserted a salvo, acknowledging the superiority, by which he reserved his right to the homage of the kingdom of Scotland, when it should be claimed by him or his heirs. The bishop of Norwich suggested this salvo: and this was the reason why Alexander would not perform the homage in person, but left it to be performed by Robert Bruce earl of Carric; Alexander standing by, and expressly declaring, that it was only paid for the lands he held in England.—No acts of hostility, however, took place during the lifetime of Alexander, who was killed on the 19th of March 1285, in the 45th year of his age, by his horse rushing down the black rock near Kinghorn as he was hunting.

Both before and after the death of Alexander, the great subjects of Scotland seemed to have been sensible of Edward's ambitious designs. On the marriage of Margaret with Eric prince of Norway, the states of Scotland passed an act obliging themselves to receive her and her heirs as queen and sovereigns of Scotland. Edward at that time was in no condition to oppose this measure, in which the Scots were unanimous; and therefore contented himself with forming factions among the leading men of the country. Under pretence of resuming the cross, he renewed his intrigues at the court of Rome, and demanded leave from the pope to collect the tenths in Scotland; but his holiness replied, that he could make no such grant without the consent of the government of Scotland. On the death of Margaret queen of Norway, her daughter, in consequence of the act above-mentioned, was recognized by the states as queen of Scotland. As she was then but two years old, they came to a resolution of excluding from all share in the government, not only Edward I. but their queen's father; and they accordingly established a regency from among their own number, consisting of the six following noblemen; viz. Robert Wishart bishop of Glasgow, Sir James Cummin of Badenoch, senior, James lord high steward of Scotland, who were to have the superintendency of all that part of Scotland which lay to the south of the Forth; William Fraser bishop of St Andrews, Duncan M'Duff earl of Fife, and Alexander Cummin earl of Buchan, who were to have the direction of all affairs to the north of the same river.—With these arrangements Eric was exceedingly displeased, as considering himself as the only rightful guardian of his own child. He therefore cultivated a good correspondence with Edward, from whom he had received considerable pecuniary favours; and perceiving that the states of Scotland were unanimous in excluding all foreigners from the management of their concerns, he fell in with the views of the king of England, and named commissioners to treat with those of Edward upon the Scots affairs. These negotiations terminated in a treaty of marriage between the queen of Scotland and Edward prince of Wales, young as they both were. This alarmed the states of Scotland, who resolved not to suffer their queen to be disposed of without their consent. It was therefore agreed by the commissioners on both sides, to acquaint them with the result of their conferences, and to demand that a deputation should be sent up for settling the regency of Scotland, or, in other words, for putting the sovereign power into the hands of the two kings. As the

79
Treaty of
marriage
between the
young
queen of
Scotland
and the
prince of
Wales.

two parties, however, were within the prohibited degrees of consanguinity, being first cousins, a dispensation was applied for to Pope Boniface, who granted it on condition that the peers of Scotland consented to the match.

Though the Scots nobility were very much against this match, they could not refuse their consent to it when proposed by the father and grand-uncle of their young queen. They therefore appointed the bishops of St Andrew's and Glasgow, with Robert Bruce lord of Annandale, and John Cummin, to attend as their deputies, but with a salvo to all the liberties and honours of the realm of Scotland; to which Edward agreed. These deputies met at Salisbury with those of England and Norway; and it was at last agreed, 1. That the young queen should be sent from Norway (free of all marriage-engagements) into England or Scotland. 2. That if the queen came to England, she should be at liberty to repair to Scotland as soon as the distractions of that kingdom should be settled: that she should, on her arrival in her own dominions, be free of all matrimonial contracts; but that the Scots should engage not to dispose of her in marriage without her father or Edward's consent. 3. The Scots deputies promised to give such security as the Norwegian commissioners should require, that the tranquillity of the nation should be settled before her arrival. 4. That the commissioners of Scotland and Norway, joined with commissioners from England, should remove such regents and officers of state in Scotland as should be suspected of disaffection, and place others in their stead. If the Scots and Norwegian commissioners should disagree on that or any other head relating to the government of Scotland, the decision was to be left to the arbitration of English commissioners.

The party of Edward was now so strong in Scotland, that no opposition was made to the late agreement, in a parliament held at Brechin to deliberate upon the settlement of the kingdom. It is uncertain whether he communicated in form to the Scottish parliament the pope's dispensation for the marriage: but most probably he did not; as, in a letter written to him by the states of Scotland, they mention this as a matter they heard by report. On the whole, however, they highly approved of the marriage, upon certain conditions to which Edward was previously to agree; but the latter, without waiting to perform any conditions, immediately sent for the young queen from Norway. This exceedingly displeased Eric, who was by no means inclined to put his daughter into the hands of a prince whose sincerity he suspected, and therefore shifted off the departure of the princess till he should hear farther from Scotland. Edward, alarmed at this, had again recourse to negotiation; and ten articles were at last drawn up, in which the Scots took all imaginable precautions for the safety and independency of their country. These articles were ratified by Edward on the 28th of August 1289; yet, even after the affair of the marriage was fully settled, he lost no time in procuring as strong a party as he could. At the head of these were the bishop of St Andrew's and John Baliol. That prelate, while he was in England, was highly caressed by Edward, from whom he had great expectations of preferment; and Baliol, having great estates in England, considered the latter as his sovereign. The bi-
shop,

Scotland. shop, on his return to Scotland, acted as a spy for Edward, and carried on with him a secret correspondence, informing him of all public transactions. It appears from this correspondence, that the Scots were far from being unanimous as to the marriage. Bruce earl of Annandale suspected, for some reason or other, that the young queen was dead; and, soon after Michaelmas 1290, assembled a body of forces, and was joined by the earl of Mar and Athol. Intelligence of these commotions was carried to Edward by Baliol; and the bishop of St Andrew's advised Edward, in case the report of the queen's death should prove true, to march a body of troops towards Scotland, in order to secure such a successor as he thought proper.

80
Death of
the queen.

Edward, in the mean time, consented to allow ambassadors to be sent from Scotland to bring over the young queen; previous to which, he appointed the bishop of Durham to be lieutenant in Scotland for the queen and her future husband; and all the officers there, both civil and military, obliged themselves to surrender their employments and fortresses to the king and queen (that is, to Edward) immediately on their arrival in Scotland. But while the most magnificent preparations were making for the reception of the young queen, certain intelligence of her death was received; but it is not certainly known whether this event happened before the arrival of the ambassadors in Norway or after her departure from that country.

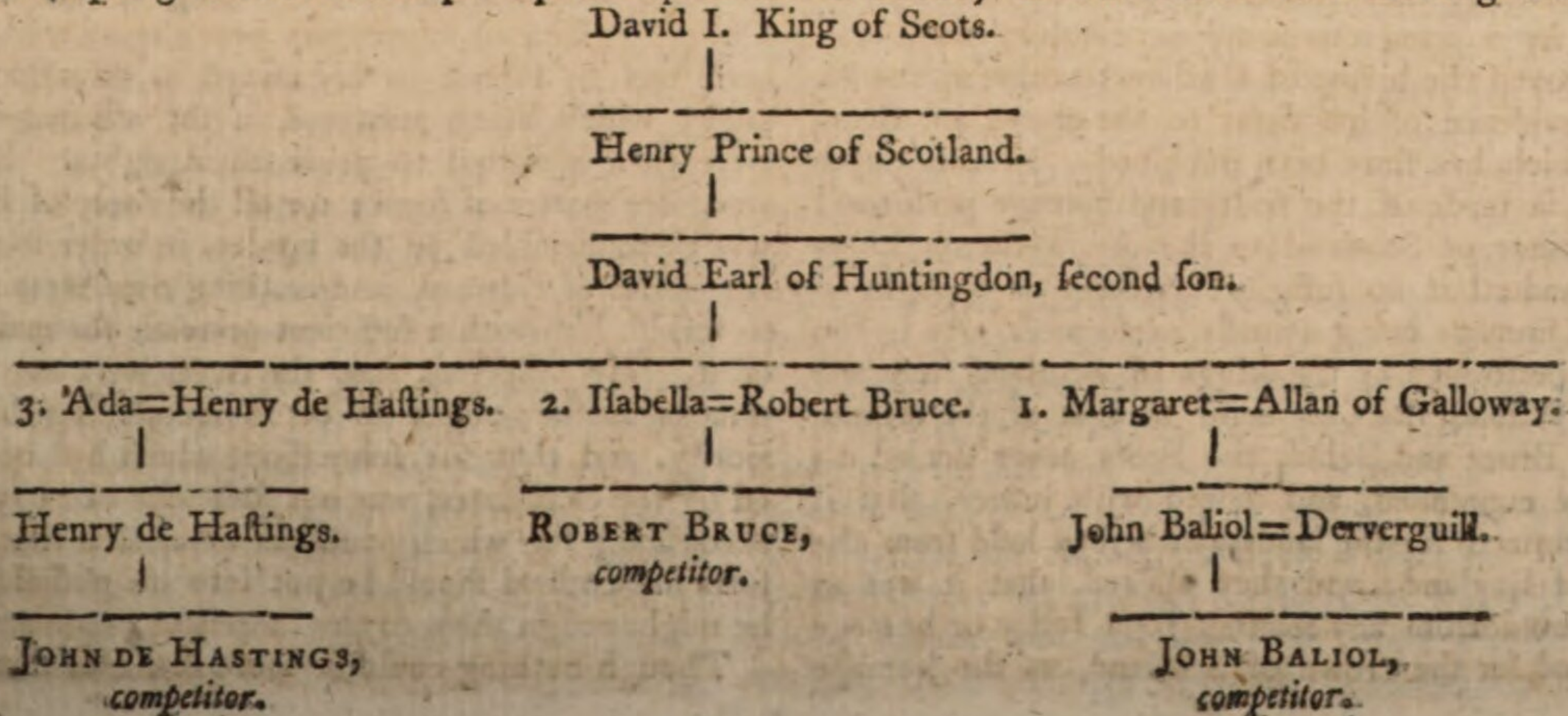
81
A number
of competi-
tors for the
Crown.

The Scots were thrown into the utmost consternation by the news of their queen's death; while, on the other hand, Edward was as well prepared as if he had known what was to happen. The state of Scotland at this time indeed was to the last degree deplorable. The act of succession established by the late king had no farther operation, being determined by the death of the queen; and since the crown was rendered hereditary, there was no precedent by which it could be settled. The Scots, in general, however, turned their eyes upon the posterity of David earl of Huntingdon, brother to the two kings Malcolm the Maiden and his successor William, both of whom died without lawful issue. The earl had three daughters. Margaret, the eldest, was married to Allan lord of Galloway; the only issue of which marriage was Derverguill wife to John Baliol, who had a son of the same name, a competitor

Scotland. for the crown. The second daughter, Isabella, was married to Robert Bruce; and their son Robert was a candidate likewise. The third daughter, Ada, had been married to Henry Hastings, an English nobleman, and predecessor to the present earl of Huntingdon. John Hastings, the son of this marriage, was a third competitor; but as his claim was confessedly the worst of the three, he only put in for a third of the kingdom, on the principle that his mother was joint-heir with her two sisters (c). Several other claimants now started up. Florence earl of Holland pretended to the crown of Scotland in right of his great grandmother Ada, the eldest lawful sister of William, sometime king; as did Robert de Pynkeny, in the right also of his great-grandmother Marjory, second sister of the same king William. Patrick Gallightly was the son of Henry Gallightly, a bastard of William; William de Rofs was descended of Isabel; Patrick earl of March, of Ilda or Ada; and William de Vescei, of Marjory; who were three natural daughters of king William. Roger de Mandeville, descended from Aufrie, another natural daughter of William, also put in his claim; but the right of Nicolas de Soulis, if bastardy could give a right, was better than the former. His grandmother Marjory, the wife of Allan le Huissier, was a natural daughter of Alexander II. and consequently sister to Alexander III. John Cummin lord of Badenoch derived his claim from a more remote source, viz. Donald Bane, who usurped the crown about 200 years before this time; but he was willing to resign his pretensions in favour of John Baliol. The latter indeed had surely the best right; and, had the succession been regulated as it is in all hereditary kingdoms at this day, he would undoubtedly have carried it. Bruce and Hastings, however, pleaded that they were preferable, not only to John Baliol the grandchild of Margaret, but also to Derverguill her daughter and his mother, for the following reason. Derverguill and they were equally related to their grandfather earl David: she was indeed the daughter of his eldest daughter; but she was a woman, they were men; and, said they, the male in the same degree ought to succeed to sovereignties, in their own nature impartible, preferable to the female.

Notwithstanding this number of candidates, however,

(c) The pedigree of the three principal competitors will be fully understood from the following scheme.



Scotland. ever, it was soon perceived, that the claims of all of them might be cut off excepting two, viz. Baliol and Bruce, of whom the former had the preference with respect to hereditary right, and the latter as to popularity. Baliol had strongly attached himself to Edward's party; which being by far the most powerful in Scotland, gave him a decided superiority over Bruce. The event was, that Edward, by his own party most probably, though, some say, by the unanimous voice of the Scot's parliament, was appointed to decide between the two competitors. It soon appeared, however, that Edward had no mind to adjudge the crown to any person but himself; for, in an assembly held at Norham on the 10th of May 1291, Brabazon the chief justice of England informed the members, "That his master was come thither in consideration of the state of the realm of Scotland, which was then without a king, to meet them, as *direct sovereign* of that kingdom, to do justice to the claimants of his crown, and to establish a solid tranquillity among his people; that it was not his intention to retard justice, nor to usurp the right of any body, or to infringe the liberties of the kingdom of Scotland, but to render to every one his due. And to the end this might be done with the more ease, he required the assent of the states *ex abundante*, and that they should own him as *direct sovereign* of the kingdom; offering, upon that condition, to make use of their counsels to do what justice demanded." The deputies were astonished at this declaration, and replied, that they were by no means prepared to decide on Edward's claim of superiority; but that Edward ought previously to judge the cause between the two competitors, and require homage from him whom he should choose to be king. Edward treated this excuse as trifling, and gave them till next day to consider of his demand. Accordingly, on that day, the assembly was held in Norham church, where the deputies from Scotland insisted upon giving no answer to Edward's demands, which could be decided only by the whole community; representing, at the same time, that numbers of the noblemen and prelates were absent, and that they must have time to know their sense of the affair. In consequence of this, Edward gave them a delay of three weeks; which interval he employed in multiplying claimants to the crown of Scotland, and in flattering each with hopes, if he would acknowledge his superiority. But when the assembly met, according to appointment, on the 2d of June following, they found the place of meeting surrounded by a numerous army of English. Edward had employed the bishop of Durham to draw up the historical evidence of his right to the crown of Scotland; which has since been published. In this paper mention is made of the fealty and homage performed by the kings of Scotland to the Anglo-Saxon kings of England; but no sufficient evidence is brought of any such homage being actually performed. As to the homage performed by the kings of Scotland from the time of William the Conqueror to that of the dispute between Bruce and Baliol, the Scots never denied it; but they contended, and indeed with justice, that it was performed for the lands which they held from the crown of England; and they alleged, that it was as far removed from any relation to a fealty or homage performed for the crown of Scotland, as the homage

82
Edward declares himself sovereign of Scotland.

paid by the English monarchs to the crown of France Scotland. was removed from all relation to the crown of England. With regard to the homage paid by William king of Scotland to Henry II. of England, it was not denied that he performed it for the whole kingdom of Scotland: but they pleaded, that it was void of itself, because it was extorted when William was a prisoner to Henry; and they produced Richard I.'s charters, which pronounced it to have been compulsive and iniquitous.

But, however urgent these reasons of the Scots might be, Edward was by no means disposed to examine into their merits. Instead of this, he closeted the several pretenders to the crown; and having found them all ready to comply with his measures, he drew up the following charter of recognition to be signed by them all.

"To all who shall hear this present letter.

"We Florence earl of Holland, Robert de Bruce The candidate
lord of Annandale, John Baliol lord of Galloway, John dates sign
Hastings lord of Abergavenny, John Cummin lord of an assent
Badenoch, Patrick de Dunbar earl of March, John
Vesci for his father Nicholas Soulis, and William de
Ross, greeting in the Lord:

"Whereas we intend to pursue our right to the kingdom of Scotland; and to declare, challenge, and aver the same before him that hath most power, jurisdiction, and reason to try it; and the noble prince Edward, by the grace of God king of England, &c. having informed us, by good and sufficient reasons, that to him belongs the sovereign seigniorship of the same: We therefore promise, that we will hold firm and stable his act; and that he shall enjoy the realm to whom it shall be adjudged before him. In witness whereof, we have set our seals to this writing, made and granted at Norham, the Tuesday after the Ascension, in the year of Grace 1291."

Edward then declared, by the mouth of his chancellor, that although, in the dispute which was arisen between the several claimants, touching the succession to the kingdom of Scotland, he acted in quality of sovereign, in order to render justice to whomsoever it was due; yet he did not thereby mean to exclude himself from the hereditary right which in his own person he might have to that crown, and which right he intended to assert and improve when he should think fit: and the king himself repeated this protestation with his own mouth in French. The candidates were then severally called upon by the English chancellor, to know whether they were willing to acknowledge Edward's claim of superiority over the crown of Scotland, and to submit to his award in disposing of the same; which being answered in the affirmative, they were then admitted to prove their rights. But this was mere matter of form; for all the force of England was then assembled on the borders in order to support the claims of Edward, and nothing now remained but to furnish him with a sufficient pretence for making use of it. He observed, that the Scots were not so unanimous as they ought to be in recognising his superiority, and that the submission, which had been signed by the candidates, was not sufficient to carry it into execution; for which reason he demanded that all the forts in Scotland should be put into his possession, that he might resign them to the successful candidate.

Though nothing could be more shameful than a tame Scotland, com-

84
Edward demands possession of all the fortified places in Scotland.

Scotland. compliance with this last demand of Edward, the regency of Scotland without hesitation yielded to it also; for which they gave the following reasons. "That whereas they (the states of Scotland) had, with one assent, already granted that King Edward, as superior lord of Scotland, should give sentence as to their several rights and titles to the crown of Scotland, &c. but as the said king of England cannot put his judgment in full execution to answer effectually without the possession or seisin of the said country and its castles; we will, grant, and assent, that he, as sovereign lord thereof, to perform the things aforesaid, shall have seisin of all the lands and castles in Scotland, until right be done to the demandants, and to the guardians and community of the kingdom of Scotland, to restore both it and its castles, with all the royalties, dignities, franchises, customs, rights, laws, usages, and possessions, with their appurtenances, in the same state and condition they were in when he received them; saving to the king of England the homage of him that shall be king; so as they may be restored within two months after the day the rights shall be determined and affirmed; and that the profits of the nation which shall be received in the mean time shall be kept in the hands of the chamberlain of Scotland that now is, and one to be joined with him by the king of England; so as the charge of the government, castles, and officers of the realm, may be deducted. In witness whereof, &c."

85
Which is
agreed to
by the
states.

For these reasons, as it is said, the regency put into the hands of Edward all the forts in the country. Gilbert de Umfreville alone, who had the command of the castles of Dundee and Forfar, refused to deliver them up, until he should be indemnified by the states, and by Edward himself, from all penalties of treason of which he might afterwards be in danger.

But though Edward had thus got into his hands the whole power of the nation, he did not think proper to determine every thing by his own authority. Instead of this, he appointed commissioners, and promised to grant letters-patent declaring that sentence should be passed in Scotland. It had been all along foreseen that the great dispute would be between Bruce and Baliol; and though the plea of Cummin was judged frivolous, yet he was a man of too much influence to be neglected, and he agreed tacitly to resign it in favour of Baliol. Edward accordingly made him the compliment of joining him with Baliol in nominating 40 commissioners. Bruce was to name 40 more; and the names of the 80 were to be given in to Edward in three days; after which the king was to add to them 24 of his own choosing. The place and time of meeting were left in their own option. They unanimously pitched upon Berwick for the place of meeting; but as they could not agree about the time, Edward appointed the 2d of August following. Soon after this, the regents resigned their commissions to Edward; but he returned them, with powers to act in his name; and he nominated the bishop of Caithness to be chancellor of Scotland; joining in the commission with him Walter de Hemondesham an Englishman, and one of his own secretaries. Still, however, he met with great difficulties. Many of his own great men, particularly the earl of Gloucester, were by no means fond of increasing the power of the English monarch by the acquisition of Scotland; and therefore threw such obstacles in his way, that he

86
Commis-
sioners ap-
pointed to
determine
the preten-
sions of the
candidates

was again obliged to have recourse to negotiation and intrigue, and at last to delay the meeting until the 2d of June in 1292: but during this interval, that he might the better reconcile the Scots to the loss of their liberty, he proposed an union of the two kingdoms; and for this he issued a writ by virtue of his superiority.

The commissioners having met on the second of June 1292, ambassadors for Norway presented themselves in the assembly, demanding that their master should be admitted into the number of the claimants, as father and next heir to the late queen. This demand too was admitted by Edward, after the ambassadors had acknowledged his superiority over Scotland; after which he proposed that the claims of Bruce and Baliol should be previously examined, but without prejudice to those of the other competitors. This being agreed to, he ordered the commissioners to examine by what laws they ought to proceed in forming their report. The discussion of this question was attended with such difficulty, and the opinions on it were so various, that Edward once more adjourned the assembly to the 12th of October following; at which time he required the members to give their opinions on the two following points: 1. By what laws and customs they ought to proceed to judgment; and, supposing there could be no law or precedent found in the two kingdoms, in what manner? 2. Whether the kingdom of Scotland ought to be taken in the same view as all other fiefs, and to be awarded in the same manner as earldoms and baronies? The commissioners replied, that Edward ought to give justice conformable to the usage of the two kingdoms; but that if no certain laws or precedents could be found, he might, by the advice of his great men, enact a new law. In answer to the second question they said, that the succession to the kingdom might be awarded in the same manner as to other estates and great baronies. Upon this, Edward ordered Bruce and Baliol to be called before him; and both of them urged their respective pleas, and answers, to the following purpose.

Bruce pleaded, 1. That Alexander II. despairing of heirs of his own body, had declared that he held him to be the true heir, and offered to prove by the testimony of persons still alive, that he declared this with the advice and in the presence of the good men of his kingdom. Alexander III. also had declared to those with whom he was intimate, that, failing issue of his own body, Bruce was his right heir. The people of Scotland also had taken an oath for maintaining the succession of the nearest in blood to Alexander III. who ought of right to inherit, failing Margaret the Maiden of Norway and her issue.—Baliol answered, that nothing could be concluded from the acknowledgment of Alexander II. for that he left heirs of his body; but made no answer to what was said of the sentiments of Alexander III. and of the oath made by the Scottish nation to maintain the succession of the next of blood.

2. Bruce pleaded, that the right of reigning ought to be decided according to the natural law, by which kings reign; and not according to any law or usage in force between subject and subject: That by the law of nature, the nearest collateral in blood has a right to the crown; but that the constitutions which prevail among vassals, bind not the lord, much less the sovereign: That although in private inheritances, which

87
Pleas of
Bruce and
Baliol.

^{Scotland.} are divisible, the eldest female heir has a certain prerogative, it is not so in a kingdom that is indivisible; there the nearest heir of blood is preferable whenever the succession opens.—To this Baliol replied, that the claimants were in the court of their lord paramount; and that he ought to give judgment in this case, as in the case of any other tenements, depending on his crown, that is, by the common law and usage of his kingdom, and no other. That by the laws and usages of England, the eldest female heir is preferred in the succession to all inheritances, indivisible as well as divisible.

3. It was urged by Bruce, that the manner of succession to the kingdom of Scotland in former times, made for his claim; for that the brother, as being nearest in degree, was wont to be preferred to the son of the deceased king. Thus, when Kenneth Macalpin died, his brother Donald was preferred to his son Constantine, and this was confirmed by several other authentic instances in the history of Scotland.—Baliol answered, that if the brother was preferred to the son of the king, the example proved against Bruce; for that the son, not the brother, was the nearest in degree. He admitted, that after the death of Malcolm III. his brother usurped the throne; but he contended, that the son of Malcolm complained to his liege lord the king of England, who dispossessed the usurper, and placed the son of Malcolm on the throne; that after the death of that son the brother of Malcolm III. again usurped the throne; but the king of England again dispossessed him, and raised Edgar, the second son of Malcolm, to the sovereignty.

4. Bruce pleaded, that there are examples in other countries, particularly in Spain and Savoy, where the son of the second daughter excluded the grandson of the eldest daughter. Baliol answered, that examples from foreign countries are of no importance; for that according to the laws of England and Scotland, where kings reign by succession in the direct line, and earls and barons succeed in like manner, the issue of the younger sister, although nearer in degree, excludes not the issue of the eldest sister, although more remote; but the succession continues in the direct line.

5. Bruce pleaded, that a female ought not to reign, as being incapable of governing: That at the death of Alexander III. the mother of Baliol was alive; and as she could not reign, the kingdom devolved upon him, as being the nearest male heir of the blood royal. But to this Baliol replied, that Bruce's argument was inconsistent with his claim: for that if a female ought not to reign, Isabella the mother of Bruce ought not, nor must Bruce himself claim through her. Besides, Bruce himself had sworn fealty to a female, the maiden of Norway.

88

Judgment
given in fa-
vour of Ba-
liol,

The arguments being thus stated on both sides, Edward demanded an answer from the council as to the merits of the competitors. He also put the following question to them: By the laws and usages of both kingdoms, does the issue of the eldest sister, though more remote in one degree, exclude the issue of the second sister, though nearer in one degree? or ought the nearer in one degree, issuing from the second sister, to exclude the more remote in one degree issuing from the eldest sister? To this it was answered unanimously, That by the laws and usages of both kingdoms, in every heritable succession, the more remote in one de-

gree lienally descended from the eldest sister, was preferable to the nearer in degree issuing from the second sister. In consequence of this, Bruce was excluded from the succession; upon which he entered a claim for one third of the kingdom: but being baffled in this also, the kingdom of Scotland being determined an indivisible fee, Edward ordered John Baliol to have seisin of Scotland; with this caveat, however, "That this judgment should not impair his claim to the property of Scotland."

After so many disgraceful and humiliating concessions on the part of the Scots, John Baliol was crown-crowned at Scone on the 30th November 1292; and finished the ceremony by doing homage to the king of England. All his submissions, however, could not satisfy Edward, as long as the least shadow of independence remained to Scotland. A citizen of Berwick appealed from a sentence of the Scots judges appointed by Edward, in order to carry his cause into England. But this was opposed by Baliol, who pleaded a promise made by the English monarch, that he should "observe the laws and usages of Scotland, and not withdraw any causes from Scotland into his English courts." Edward replied, that it belonged to him to hear the complaints made against his own ministers; and concluded with asserting his right, not only to try Scots causes in England, but to summon the king of Scotland, if necessary, to appear before him in person. Baliol had not spirit to resist; and therefore signed a most disgraceful instrument, by which he declared, that all the obligations which Edward had come under were already fulfilled, and therefore that he discharged them all.

Edward now thought proper to give Baliol some marks of his favour, the most remarkable of which was giving him seisin of the Isle of Man; but it soon appeared that he intended to exercise his rights of superiority in the most provoking manner. The first instance was in the case of Malcolm earl of Fife. This nobleman had two sons, Colban his heir, and another who is constantly mentioned in history by the family-name of Macduff.—It is said, that Malcolm put Macduff in possession of the lands of Reres and Crey. Malcolm died in 1266; Colban his son, in 1270; Duncan the son of Colban, in 1288. To this last earl, his son Duncan, an infant, succeeded. During the nonage of this Duncan, grand-nephew of Macduff, William bishop of St Andrew's, guardian of the earldom, dispossessed Macduff. He complained to Edward; who having ordered his cause to be tried, restored him again to possession. Matters were in this state when Baliol held his first parliament at Scone, 10th February 1292. There Macduff was cited to answer for having taken possession of the lands of Reres and Crey, which were in possession of the king since the death of the last earl of Fife. As his defences did not satisfy the court, he was condemned to imprisonment; but an action was reserved to him against Duncan, when he should come of age, and against his heirs. In all this defence, it is surprising that Macduff should have omitted his strongest argument, viz. that the regents, by Edward's authority, had put him in possession, and that Baliol had ratified all things under Edward's authority. However, as soon as he was set at liberty, he petitioned Baliol for a rehearing; but this being refused, he appealed

89

Who is
crown-crowned at
Scone.

90
Haughty
behaviour
of Edward.

Scotland. 91
He summons Baliol to appear before him,

to Edward, who ordered Baliol to appear before him in person on the 25th of March 1293: but as Baliol did not obey this order, he summoned him again to appear on the 14th of October. In the mean time the English parliament drew up certain *standing orders* in cases of appeal from the king of Scots; all of which were harsh and captious. One of these regulations provided, "that no excuse of absence should ever be received either from the appellant, or the king of Scotland respondent; but that the parties might have counsel if they demanded it."

92
Who behaves with resolution at his trial.

Though Baliol had not the courage to withstand the second summons of Edward, he behaved with considerable resolution at the trial. The cause of Macduff being come on, Edward asked Baliol what he had to offer in his own defence; to which he replied, "I am king of Scotland. To the complaint of Macduff, or to ought else respecting my kingdom, I dare not make answer without the advice of my people."—Edward affected surprise at this refusal, after the submissions which Baliol had already made him; but the latter steadily replied, "In matters respecting my kingdom, I neither *dare* nor *can* answer in this place, without the advice of my people." Edward then desired him to ask a farther adjournment, that he might advise with the nation. But Baliol, perceiving that his doing so would imply an acquiescence in Edward's right of requiring his personal attendance on the English courts, made answer, "That he would neither ask a longer day, nor consent to an adjournment."—It was then resolved by the parliament of England, that the king of Scotland had offered no defence; that he had made evasive and disrespectful answers: and that he was guilty of manifest contempt of the court, and of open disobedience. To make recompense to Macduff for his imprisonment, he was ordered damages from the king of Scots, to be taxed by the court; and it was also determined that Edward should inquire, according to the usages of the country, whether Macduff recovered the tenements in question by the judgment of the king's court, and whether he was dispossessed by the king of Scots. It was also resolved, that the three principal castles of Scotland, with the towns wherein they were situated, and the royal jurisdiction thereof, should be taken into the custody of the king, and there remain until the king of Scots should make satisfaction for his contempt and disobedience. But, before this judgment was publicly intimated, Baliol addressed Edward in the following words: "My lord, I am your liege-man for the kingdom of Scotland; that, whereof you have lately treated, respects my people no less than myself: I therefore pray you to delay it until I have consulted my people, lest I be surprised through want of advice: They who are now with me, neither will nor dare advise me in absence of the rest of my kingdom. After I have advised with them, I will in your first parliament after Easter report the result, and do to you what I ought."

94
Edward's demands on Scotland.

In consequence of this address, Edward, with consent of Macduff, stopped all proceedings till the day after the feast of Trinity 1294. But before this term Edward was obliged to suspend all proceedings against the Scots, by a war which broke out with France. In a parliament held this year by Edward, the king of Scotland appeared, and consented to yield up the whole re-

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venues of his English estates for three years to assist Edward against his enemy. He was also *requested* and *ordered* by Edward to extend an embargo laid upon the English vessels all over Scotland; and this embargo to endure until the king of England's further pleasure should be known. He also requested him to send some troops for an expedition into Gascony, and required the presence and aid of several of the Scottish barons for the same purpose. The Scots, however, eluded the commands of Edward, by pretending that they could not bring any considerable force into the field; and, unable to bear his tyranny any longer, they negotiated an alliance with Philip king of France. Having assembled a parliament at Scone, they prevailed upon Baliol to dismiss all the Englishmen whom he maintained at his court. They then appointed a committee of twelve, four bishops, four earls, and four barons, by whose advice every thing was to be regulated; and, if we may credit the English historians, they watched the conduct of Baliol himself, and detained him in a kind of honourable captivity. However, they could not prevent him from delivering up the castles of Berwick, Roxburgh, and Jedburgh, to the bishop of Carlisle; in whose custody they were to remain during the war between England and France, as a pledge of his allegiance. Notwithstanding this, Baliol concluded the alliance with Philip; by which it was stipulated, that the latter should give in marriage the eldest daughter of the count of Anjou to Baliol's son; and it was also provided, that Baliol should not marry again without the consent of Philip. The king of Scotland engaged to assist Philip in his wars at his own expence, and with his whole power, especially if Edward invaded France; and Philip on his part engaged to assist Scotland, in case of an English invasion, either by making a diversion, or by sending succours.

Scotland.

95
The Scots enter into an alliance with France.

Puffed up with the hopes of assistance from France, the Scots invaded Cumberland with a mighty army, and laid siege to Carlisle. The men abandoned the place; but the women mounted the walls, and drove the assailants from the attack. Another incursion into Northumberland proved almost as disgraceful. Their whole exploits consisted in burning a nunnery at Lameley, and a monastery at Corebridge, though dedicated to their patron St Andrew; but having attempted to storm the castle of Harbottle, they were repulsed with loss. In the mean time Edward, with an army equal in number to that of the Scots, but much superior on account of its discipline, invaded the east coast of Scotland. Berwick had either not been delivered according to promise, or had been resumed by the Scots, and was now defended by a numerous garrison. Edward assaulted it by sea and land. The ships which began the attack were all either burnt or disabled; but Edward having led on his army in person, took the place by storm, and cruelly butchered the inhabitants, to the number of 8000, without distinction of sex or age. In this town there was a building called the *Red-hall*, which certain Flemings possessed by the tenure of defending it at all times against the king of England. Thirty of these maintained their ground for a whole day against the English army; but at night the building being set on fire, all of them perished in the flames. The same day the castle capitulated; the garrison, consisting of 2000 men, marched out with all the honours

96
The Scots invade England without success.

97
Berwick taken, and the inhabitants massacred by Edward.

Scotland. of war, after having sworn never to bear arms against England.

⁹⁸
Baliol's renunciation of his allegiance to England.

In the mean time, Baliol, by the advice of his parliament, solemnly and openly renounced his allegiance to Edward, sending the following declaration.

"To the magnificent prince, Edward, by the grace of God, king of England; John, by the same grace, king of Scotland.

"Whereas you, and others of your kingdom, you not being ignorant, or having cause of ignorance, by your violent power, have notoriously and frequently done grievous and intolerable injuries, contempts, grievances, and strange damages against us, the liberties of our kingdom, and against God and justice; citing us, at your pleasure, upon every slight suggestion, out of our kingdom; unduly vexing us; seizing our castles, lands, and possessions, in your kingdom; unjustly, and for no fault of ours, taking the goods of our subjects, as well by sea as land, and carrying them into your kingdom; killing our merchants, and others of our kingdom; carrying away our subjects and imprisoning them: For the reformation of which things, we sent our messengers to you, which remain not only unredressed, but there is every day an addition of worse things to them; for now you are come with a great army upon the borders, for the disinheriting us, and the inhabitants of our kingdom; and, proceeding, have inhumanly committed slaughter, burnings, and violent invasions, as well by sea as land: We not being able to sustain the said injuries, grievances, and damages any longer, nor to remain in your fealty or homage, extorted by your violent oppression, we restore them to you, for ourself, and all the inhabitants of our kingdom, as well for the lands we hold of you in your kingdom, as for your pretended government over us."

Edward was presented with this renunciation by the hands of the intrepid Henry abbot of Aberbrothwick; and as it was favourable to his political views, he received it rather with contempt than anger. "The foolish traitor," said he to the abbot, "since he will not come to us, we will go to him." The abbot had been persuaded by his enemies, of whom he had many in Scotland, to present this letter, in hopes that Edward would have put him to death; but he had address enough to escape safe out of his hands, without receiving any other answer.

Though this scheme of renunciation had been concerted some time before, the declaration was not sent to Edward till after the taking of Berwick. The fate of Scotland, however, after it, was soon decided. The Earl of March had taken part with Edward, but the countess betrayed his castle of Dunbar into the hands of the Scots. Edward sent a chosen body of troops to recover the place. The whole force of Scotland opposed them on the heights above Dunbar; but leaving their advantageous post, and pouring down on their enemies in confusion, they were dispersed and defeated.

⁹⁹
The Scots defeated at Dunbar.

The castle of Dunbar surrendered at discretion; that of Roxburgh followed the same example; the castle of Edinburgh surrendered after a short siege; and Stirling was abandoned. The Scots, in the mean time, were guilty of the greatest extravagances. During the short interval between the loss of Berwick and the defeat at Dunbar, an order was made for expelling all the English ecclesiastics who held benefices in England; all the partizans of England, and all neutrals, were declared traitors, and their estates confiscated. But the great successes of Edward soon put an end to these impotent acts of fury. Baliol was obliged to implore the mercy of the conqueror. Divested of his royal ornaments, and bearing a white rod in his hand, he performed a most humiliating penance; confessing, that by evil and false counsel, and through his own simplicity, he had grievously offended his liege lord. He recapitulated his various transgressions, in concluding an alliance with France while at enmity with England; in contracting his son with the niece of the French king; in renouncing his fealty; in attacking the English territories, and in resisting Edward. He acknowledged the justice of the English invasion and conquest; and therefore he, of his own free consent, resigned Scotland, its people, and their homage, to his liege-lord Edward, 2d July 1296.

¹⁰⁰
Baliol submits, and does penance.

The king of England pursued his conquests, the barons everywhere crowding in to swear fealty to him, and renounce their allegiance with France. His journey ended at Elgin, from whence he returned southward; and, as an evidence of his having made an absolute conquest of Scotland, he carried off from Scone the wooden chair in which the kings were wont to be crowned. This chair had for its bottom the fatal stone regarded as the national palladium (D). Some of the charters

¹⁰¹
Scotland subdued.

(D) "This stone is thus described by W. Hemingford, T. i. p. 37. "Apud monasterium de Scone positus erat lapis pergrandis in ecclesia Dei, juxta magnum altare, concavus quidem *ad modum rotundæ cathedræ confectus*, in quo futuri reges loco quasi coronationis ponebantur ex more. Rege itaque novo in lapide posito, missarum solemnina incepta peraguntur, et præterquam in elevatione sacri dominici corporis, semper lapidatus, mansit." And again, T. i. p. 100. "In redeundo per Scone, præcepit tolli et Londoniis cariari, lapidem illum, in quo, ut supra dictum est, Reges Scotorum solebant poni loco coronationis suæ, et hoc in signum regni conquesti et resignati." Walsingham mentions the use to which Edward put this stone: "Ad Westmonasterium transtulit illum, jubens inde fieri celebrantium cathedram sacerdotum." This account of the fatal stone is here transcribed, that it may be compared with the appearance of the stone that now bears its name at Westminster.

Fordun has preserved the ancient rhymes concerning it; L. xi. c. 25.

"Hic rex sic totam Scotiam fecit sibi notam,
Qui sine mensura tulit inde jocalia plura,
Et pariter lapidem, Scotorum quem fore sedem
Regum decrevit fatum; quod sic inolevit,
Ni fallat fatum, Scoti quocunque locatum
Invenient lapidem, regnare tenentur ibidem."

This

Scotland. charters belonging to the abbey were carried off, and the seals torn from others: "which," says Lord Hailes, "is the only well-vouched example which I have found of any outrage on private property committed by Edward's army. It is mentioned in a charter of Robert I. and we may be assured that the outrage was not diminished in the relation."

On the 28th of August 1296, Edward held a parliament at Berwick, where he received the fealty of the clergy and laity of Scotland. It is said, that while the English monarch was employed in the conquest of Scotland, he had promised the sovereignty to Robert Bruce, lord of Annandale, in order to secure his fidelity; but being put in mind of his promise, he answered, "Have I no other business but to conquer kingdoms for you?" Bruce silently retired, and passed his days in obscurity. Among those who professed their allegiance at this parliament was Robert Bruce the younger, earl of Carrick. After this, Edward took the most effectual methods of securing his new conquest. He ordered the estates of the clergy to be restored; and having received the fealty of the widows of many of the Scottish barons, he put them in possession of their jointure-lands, and even made a decent provision for the wives of many of his prisoners. Yet, though in every thing he behaved with great moderation towards the Scots, he committed the government of certain districts, and of the chief castles in the south of Scotland, to his English subjects, of whose fidelity and vigilance he thought himself assured. In order to conciliate the affections of the clergy, he granted to the Scottish bishops, for ever, the privilege of bequeathing their effects by will, in the same manner as that privilege was enjoyed by the archbishops and bishops of England. In honour of the "glorious Confessor St Cuthbert," he gave to the monks of Durham an annual pension of 40 pounds, payable out of the revenues of Scotland, by the tenure of maintaining, before the shrine of the saint, two wax-tapers of 20 pounds weight each, and of distributing twice a-year one penny each to 3000 indigent persons. At last, having settled every thing, as he thought, in tranquillity, he departed for England, with all the pride of a conqueror.

102
New disturbances

The tranquillity established by Edward, however, was of short duration. The government of Scotland at that time required many qualities which Edward's vicegerents had not. Warrene, earl of Surry, who had been appointed governor, took up his abode in England, on pretence of recovering his health. Creffingham, the treasurer, was a voluptuous, proud, and selfish ecclesiastic; while Ormesby the justiciary was hated for his severity. Under these officers the administration of Edward became more and more feeble; bands of robbers infested the highways, and the English government was universally despised. At this critical moment arose Sir William Wallace, the hero so much celebrated in Scottish fables, and by which indeed his real exploits are so much obscured, that it is difficult to give an authentic relation of them. The most probable account is, that

103
Sir William Wallace.

he was the younger son of a gentleman (Wallace of Ellerslie) in the neighbourhood of Paisley. Having been outlawed for some offence (generally supposed to have been the killing of an Englishman), he associated with a few companions, of fortunes equally desperate with his own. Wallace himself was endowed with great strength and courage, and an active and ambitious spirit; and by his affability, eloquence, and wisdom, he maintained an authority over the rude and undisciplined multitudes who flocked to his standard. In May 1297, he began to infest the English quarters; and being successful in his predatory incursions, his party became more numerous, and he was joined by Sir William Douglas. With their united forces, these two allies attempted to surprise Ormesby the justiciary, while he held his courts at Scone; but he saved himself by a precipitate flight. After this the Scots roved over the whole country, assaulted castles, and massacred the English. Their party was joined by many persons of rank; among whom were Robert Wisheart bishop of Glasgow, the Steward of Scotland and his brother Alexander de Lindsay, Sir Richard Lundin, and Sir Andrew Moray of Bothwell. Young Bruce would have been a vast accession to the party; for he possessed all Carrick and Annandale, so that his territories reached from the frith of Clyde to Solway. But the wardens of the western marches of England suspected his fidelity, and summoned him to Carlisle. He obeyed, and made oath on the consecrated host, and on the sword of Becket, to be faithful and vigilant in the cause of Edward; and to prove his sincerity, he invaded with fire and sword the estate of Sir William Douglas, and carried off his wife and children. However, he instantly repented of what he had done: "I trust (said he), that the pope will absolve me from an extorted oath;" on which he abandoned Edward, and joined the Scottish army.

All this time Edward was in France, not in the least suspecting an insurrection among people whom he imagined he had thoroughly subdued. As soon as he received the intelligence, he ordered the earl of Surry to suppress the rebels; but he declining the command of the army himself on account of his health, resigned it to his nephew, Lord Henry Percy. A great army, some say no fewer than 40,000 men, was now assembled, with which Percy marched against the Scots. He found them encamped at Irwin, with a lake in their front, and their flanks secured by entrenchments, so that they could not be attacked without the utmost danger. The Scots, however, ruined every thing by their dissensions. Wallace was envied on account of his accomplishments, which had raised his reputation above the other officers, whose birth and circumstances were higher than his. His companions accordingly became jealous, and began to suggest, that an opposition to the English could only be productive of farther national destruction. Sir Richard Lundin, an officer of great rank, formed a party against Wallace, and went over to Edward with all his followers. He attempted to justify

104
Dissensions of the Scots.

5 B 2

his

This was the stone which Gathelus sent from Spain with his son when he invaded Ireland, which king Fergus won in Ireland, brought over with him, and placed at Scone. As the most proper authority for a story of this nature, see *Acts of Sir William Wallace*, by Blind Harry, B. i. c. 4.

Scotland. his treachery, by saying, "I will remain no longer of a party that is at variance with itself;" without considering that he himself, and his party, were partly the occasion of that variance. Other leaders entered into a negociation with the English. Bruce, the Steward and his brother Alexander de Lindefay, and Sir William Douglas, acknowledged their offences, and made submissions to Edward for themselves and their adherents.

105
Most of
them sub-
mit to the
English.

This scandalous treaty seems to have been negociated by the bishop of Glasgow, and their recantation is recorded in the following words.—"Be it known to all men: Whereas we, with the commons of our country, did rise in arms against our lord Edward, and against his peace, in his territories of Scotland and Galloway, did burn, slay, and commit divers robberies; we therefore, in our own name, and in the name of all our adherents, agree to make every reparation and atonement that shall be required by our sovereign lord; reserving always what is contained in a writing which we have procured from Sir Henry Percy and Sir Robert Clifford, commanders of the English forces; at Irvine, 9th July 1297." To this instrument was subjoined, "Escrit a Sire Willaume;" the meaning of which lord Hailes supposes to be, that the barons had notified to Sir William Wallace their having made terms of accommodation for themselves and their party.

Edward accepted the submission of the Scottish barons who had been in arms, and granted liberty to those whom he had made prisoners in the course of the former year, on condition that they should serve him in his wars against France. The inconstancy of Bruce, however, was so great, that acknowledgments of submission or oaths of fealty were not thought sufficiently binding on him; for which reason the bishop of Glasgow, the Steward, and Alexander de Lindefay, became sureties for his loyalty and good behaviour, until he should deliver his daughter Marjory as an hostage.

106
Wallace
still holds
out.

Wallace alone refused to be concerned in these shameful submissions; and, with a few resolute followers, resolved to submit to every calamity rather than give up the liberty of his country. The barons had undertaken to procure his submission as well as their own; but finding that to be impossible, the bishop of Glasgow and Sir William Douglas voluntarily surrendered themselves prisoners to the English. Edward, however, ascribed this voluntary surrender, not to any honourable motive, but to treachery. He asserted, that Wisheart repaired to the castle of Roxburgh under pretence of yielding himself up, but with the concealed purpose of forming a conspiracy in order to betray that castle to the Scots; and in proof of this, Edward appealed to intercepted letters of Wisheart. On the other hand, Wallace, ascribing the bishop's conduct to traitorous pusillanimity, plundered his house, and carried off his family captives.

Immediately after the defection of the barons at Irvine, Wallace with his band of determined followers attacked the rear of the English army, and plundered their baggage; but was obliged to retire, with the loss of 1000 men. He then found himself deserted by almost all the men of eminence and property. His army, however, increased considerably by the accession of numbers of inferior rank, and he again began to act on the offensive. While he employed himself in besieging

the castle of Dundee, he was informed that the Eng- Scotland. lish army approached Stirling. Wallace, having charged the citizens of Dundee, under the pain of death, to continue the blockade of the castle, hastened with all his troops to guard the important passage of the Forth; and encamped behind a rising ground in the neighbourhood of the abbey of Cambuskenneth. Brian Fitz-Alan had been appointed governor of Scotland by Edward; but Warrene, who waited the arrival of his successor, remained with the army. Imagining that Wallace might be induced by fair means to lay down his arms, he dispatched two friars to the Scottish camp, with terms of capitulation. "Return," said Wallace, "and tell your masters, that we came not here to treat but to assert our right, and to set Scotland free. Let them advance, they will find us prepared." The English, provoked at this answer, demanded impatiently to be led on to battle. Sir Richard Lundin remonstrated against the absurdity of making a numerous army pass by a long narrow bridge in presence of the enemy. He told them, that the Scots would attack them before they could form on the plain to the north of the bridge, and thus certainly defeat them: at the same time he offered to show them a ford, which having crossed with 500 horse, and a chosen detachment of infantry, he proposed to come round upon the rear of the enemy, and by this diversion facilitate the operations of the main body. But this proposal being rejected, the English army began to pass over; which was no sooner perceived by Wallace, than he rushed down upon them, and broke them in a moment. Cressingham the treasurer was killed, and many thousands were slain on the field, or drowned in their flight. The loss of the Scots would have been inconsiderable, had it not been for that of Sir Andrew Moray, the intimate friend and companion of Wallace, who was mortally wounded in the engagement. The Scots are said to have treated the dead body of Cressingham with the utmost indignity; to have fleeced him, and cut his skin into pieces, which they divided among themselves; while others tell us, they used it for making girths, and saddles.

107
Gives the
English a
great de-
feat near
Stirling.

The victory at Stirling was followed by the surrender of Dundee castle, and other places of strength in Scotland; at the same time the Scots took possession of Berwick, which the English had evacuated. But as a famine now took place in Scotland by the bad seasons and miseries of war, Wallace marched with his whole army into England, that he might in some measure relieve the necessities of his countrymen by plundering the enemy. This expedition lasted three weeks, during which time the whole tract of country from Cocker-mouth and Carlisle to the gates of Newcastle was laid waste with all the fury of revenge and rapacity; though Wallace endeavoured, as far as possible, to repress the licentiousness of his soldiers.

In 1298, Wallace assumed the title of "Governor of Scotland, in name of king John, and by consent of the Scottish nation;" but in what manner this office was obtained, is now in a great measure unknown. In a parliament which he convoked at Perth, he was confirmed in his authority; and under this title he conferred the constabulary of Dundee on Alexander surname *Skringecour* and his heirs, on account of his faithful aid in bearing the royal standard of Scotland. This grant

Scotland.
108
Jealousy
between
Wallace
and the
barons.

grant is said to have been made with the consent and approbation of the Scottish nobility, 29th March 1298. From this period, however, we may date the very great jealousy which took place between Wallace and the nobles who pretended to be of his party. His elevation wounded their pride; his great services reproached their inactivity in the public cause; and thus the counsels of Scotland were perplexed with distrust and envy, when almost its very existence depended on unanimity.

In June 1298, Edward, who had all this time been in Flanders, returned to England, and summoned the Scottish barons, under pain of rebellion, to attend him in parliament; and, on their disobeying his summons, he advanced with his army towards Scotland. His main force, commanded by himself, assembled at Berwick; but a body of troops, under the earl of Pembroke, having landed in the north of Fife, were defeated with great loss by Wallace, on the 12th of June. The same month Edward invaded Scotland by the way of the eastern borders. No place resisted him except the castle of Dirlتون. After a resolute defence, it surrendered to Anthony Beck, bishop of Durham.

Meanwhile the Scots were assembling all their strength in the interior part of the country. Few barons of eminence repaired to the national standard. They whose names are recorded, were John Comyn of Badenoch, the younger; Sir John Stewart of Bonkill, brother to *The Steward*; Sir John Graham of Abercorn; and Macduff, the grand-uncle of the young earl of Fife.—Robert Bruce again acceded to the Scottish party; and with his followers guarded the important castle of Air, which kept the communication open with Galloway, Argyleshire, and the isles.

The aim of Edward was to penetrate into the west, and there to terminate the war. He appointed a fleet, with provisions, to proceed to the frith of Clyde, and await his arrival in those parts. This precaution was absolutely necessary for the subsistence of his numerous army in a country impoverished and waste.

Waiting for accounts of the arrival of his fleet, he established his head-quarters at Templeliston, between Edinburgh and Linlithgow.

A dangerous insurrection arose in his camp. He had bestowed a donative of wine among his soldiers; they became intoxicated; a national quarrel ensued.—In this tumult the Welsh slew 18 English ecclesiastics. The English horsemen rode in among the Welsh, and revenged this outrage with great slaughter. The Welsh in disgust separated themselves from the army. It was reported to Edward, that they had mutinied, and gone over to the Scots: "I care not," said Edward, dissembling the danger; "let my enemies go and join my enemies; I trust that in one day I shall chastise them all."

Edward was now placed in most critical circumstances. As the fleet with provisions had been detained by contrary winds, he could not venture to advance, neither could he subsist any longer in his present quarters. To retreat would have sullied the glory of his arms, and exposed him to the obloquy and murmurs of a discontented people. Yet he submitted to this hard necessity. Abandoning every prospect of ambition and revenge, he commanded his army to return to the eastern borders. At that moment intelligence arrived that the Scots were advanced to Falkirk.

Edward instantly marched against them. His army lay that night in the fields. While Edward slept on the ground, his war-horse struck him and broke two of his ribs. The alarm arose, that the king was wounded. They who knew not the cause, repeated the cry, "The king is wounded; there is treason in the camp; the enemy is upon us." Edward mounted on horseback, and by his presence dispelled the panic. With a fortitude of spirit superior to pain, he led on his troops. At break of day, the Scottish army was descried, forming on a stony field at the side of a small eminence in the neighbourhood of Falkirk.

Wallace ranged his infantry in four bodies of a circular form. The archers, commanded by Sir John Stewart, were placed in the intervals. The horse, amounting to no more than a thousand, were at some distance in the rear. On the front of the Scots lay a morass. Having drawn up his troops in this order, Wallace pleasantly said, "Now I have brought you to the ring, dance according to your skill."

Edward placed his chief confidence in the numerous and formidable body of horsemen whom he had selected for the Scottish expedition. These he ranged in three lines. The first was led by Bigot Earl Marshal, and the Earls of Hereford and Lincoln; the second by the bishop of Durham, having under him Sir Ralph Basset of Drayton; the third, intended for a reserve, was led by the king himself. No mention is made of the disposition of his infantry: it is probable that they were drawn up behind, to support the cavalry, and to annoy the Scots with their arrows and other missile weapons.

Bigot, at the head of the first line, rushed on to the charge. He was checked by the morass, which in his impetuosity he had overlooked. This obliged him to incline to the solid ground on his left, towards the right flank of the Scottish army. The bishop of Durham, who led the second line, inclined to the right, turned the morass, and advanced towards the left flank of the Scottish army. He proposed to halt till the reserve should advance. "To mass, bishop," cried Basset, and instantly charged. The shock of the English cavalry on each side was violent, and gallantly withstood by the Scottish infantry; but the Scottish cavalry, dismayed at the number and force of the English men-at-arms, immediately quitted the field. Stewart, while giving orders to his archers, was thrown from his horse and slain. His archers crowded round his body and perished with him. Often did the English strive to force the Scottish circle. "They could not penetrate into that wood of spears," as one of their historians speaks. By repeated charges, the outermost ranks were brought to the ground. The English infantry incessantly galled the Scots with showers of stones and arrows. Macduff and Sir John Graham fell. At length the Scots were broken by the numbers and weight of the English cavalry, and the rout became universal.

The number of the Scots slain in this battle must have been very great. As is commonly the case, it is exaggerated by the historians of the victors, and reduced too low by the historians of the vanquished.

On the side of the English the loss was inconsiderable. The only persons of note who fell were Brian le Jay, master of the English Templars, and the prior of Torphichen.

Scotland.
110
The battle
of Falkirk.

111
The Scots
defeated
with great
slaughter.

Scotland. phichen in Scotland, a knight of another order of religious soldiery (E).

The Scots in their retreat burnt the town and castle of Stirling. Edward repaired the castle, and made it a place of arms. He then marched to the west. At his approach, Bruce burnt the castle of Ayr, and retired. Edward would have pursued him into Carrick; but the want of provisions stopped his further progress. He turned into Annandale, took Bruce's castle of Lochmaben, and then departed out of Scotland by the western borders.

Here may be remarked the fatal precipitancy of the Scots. If they had studied to protract the campaign, instead of hazarding a general action at Falkirk, they would have foiled the whole power of Edward, and reduced him to the necessity of an inglorious retreat.

112
Abject condition of John Baliol.

In 1299 Edward thought proper to release John Baliol the unfortunate king of Scotland, whom he had kept close prisoner ever since the year 1296. Before this time Baliol had used the most disgraceful methods to recover his liberty. He had solemnly declared, that "he would never have any intercourse with the Scots; that he had found them a false and treacherous people; and that he had reason to suspect them of an intention to poison him." However, notwithstanding all his protestations, Edward still detained him in captivity; but at last released him at the mediation of the pope, though after a singular form: He ordered the governor of

Dover to convey him to the French coast, and there Scotland, to deliver him to the papal nuncio, "with full power to the pope to dispose of Baliol and his English estate." In consequence of which he was conveyed to Witsand, delivered to the nuncio in presence of a notary and witnesses, and a receipt taken for his person. Notwithstanding this abject state, however, the Scots continued to own him for their king, and to assert their national independency. Tho' the misfortune at Falkirk had deprived them of a very considerable extent of territory, they were still in possession of the whole country beyond the Forth, as well as the county of Galloway. By general consent William Lamberton bishop of St Andrew's, Robert Bruce earl of Carrick, and John Cummin the younger, were chosen guardians of Scotland in name of Baliol. Wallace at this time was reduced to the condition of a private man; nor had he any longer the command of the Scots armies, nor any share in their councils.—The new guardians undertook to reduce the castle of Stirling, and Edward prepared to defend it. The Scots posted themselves at the Torwood, and chose Edward their ground judiciously, so that Edward could scarce 113 obliged to retire. have raised the siege without dislodging them; which finding it impossible for him to do, he returned home in disgust. Next year he invaded Scotland on the west side, wasted Annandale, and reduced Galloway; but the Scots being now taught by experience to avoid a general action, chose their posts with such skill, that Edward

(E) "This account of the action at Falkirk, extracted from Lord Hailes's *Annals*, is drawn, his Lordship informs us, from the testimony of the English historians. "They have done justice (he observes) to the courage and steadiness of their enemies; while our historians represented their own countrymen as occupied in frivolous unmeaning contests, and, from treachery or resentment, abandoning the public cause in the day of trial.

"It would be tedious and unprofitable to recite all that has been said on this subject by our own writers from Fordun to Abercrombie. How Wallace, Stewart, and Comyn, quarrelled on the punctilio of leading the van of an army which stood on the defensive: How Stewart compared Wallace to 'an owl with borrowed feathers,': How the Scottish commanders, busied in this frivolous altercation, had no leisure to form their army: How Comyn traiterously withdrew with 10,000 men: How Wallace, from resentment, followed his example: How by such disastrous incidents, the Scottish army was enfeebled, and Stewart and his party abandoned to destruction. Our histories abound in trash of this kind: There is scarcely one of our writers who has not produced an invective against Comyn, or an apology for Wallace, or a lamentation over the deserted Stewart. What dissensions may have prevailed among the Scottish commanders, it is impossible to know. It appears not to me that their dissensions had any influence on their conduct in the day of battle. The truth seems to be this: The English cavalry greatly exceeded the Scottish in numbers, were infinitely better equipped and more adroit: the Scottish cavalry were intimidated, and fled. Had they remained on the field, they might have preserved their honour; but they never could have turned the chance of that day. It was natural, however, for such of the infantry as survived the engagement, to impute their disaster to the defection of the cavalry. National pride would ascribe their flight to treachery rather than to pusillanimity. It is not improbable that Comyn commanded the cavalry: hence a report may have been spread, that Comyn betrayed his country; this report has been embellished by each successive relator. When men are seized with a panic, their commander *must* from necessity, or *will* from prudence, accompany them in their flight. Earl Warrenne fled with his army from Stirling to Berwick; yet Edward I. did not punish him as a traitor or a coward.

"The tale of Comyn's treachery, and Wallace's ill-timed repentment, may have gained credit, because it is a pretty tale, and not improbable in itself: but it amazes me that the story of the *congress* of Bruce and Wallace after the battle of Falkirk should have gained credit. I lay aside the full evidence which we now possess, 'that Bruce was not, at that time, of the English party, nor present at the battle.' For it must be admitted, that our historians knew nothing of those circumstances which demonstrate the impossibility of the *congress*. But the wonder is, that men of sound judgment should not have seen the absurdity of a long conversation between the commander of a flying army, and one of the leaders of a victorious army. When Fordun told the story, he placed a 'narrow but inaccessible glen' between the speakers. Later historians have substituted the river Carron in the place of the inaccessible glen, and they make Bruce and Wallace talk across the river like two young declaimers from the pulpits in a school of rhetoric."

Scotland. ward could not penetrate farther; and the same year a truce was concluded with the Scots, to continue till Whitfunday 1301.

114
The crown
of Scotland
claimed by
Pope Boni-
face VIII.

This year a new competitor appeared for the crown of Scotland. Boniface VIII. in a bull directed to Edward, averred, that Scotland belonged anciently, and did still belong, to the holy see; and supported his extravagant claim by some strange authorities; such as, that Scotland had been miraculously converted by the relics of St Andrew: after which he proceeded to show the futility of Edward's pretensions, and that Scotland never had any feudal dependence on England. He required Edward to set at liberty all the Scottish ecclesiastics, particularly Wisheart bishop of Glasgow, and to remove his officers from the patrimony of the church: "But (added he) should you have any pretensions to the whole, or any part of Scotland, send your proctors to me within six months; I will hear and determine according to justice; I take the cause under my own peculiar cognizance."

115
His preten-
sions an-
swered by
Edward
and his par-
liament.

This interposition of the pope had probably been procured by Scottish emissaries at the court of Rome; but, however ridiculous his pretensions might be, they afforded matter of very serious consideration to Edward. After spending a whole winter in deliberations, Edward and his parliament made separate answers to the pope. The answer of the parliament was to the following purpose: All England knows, that ever since the first establishment of this kingdom, our kings have been liege-lords of Scotland. At no time has the kingdom of Scotland belonged to the church. In temporals, the kings of England are not amenable to the see of Rome. We have with one voice resolved, that, as to temporals, the king of England is independent of Rome; that he shall not suffer his independency to be questioned; and therefore, that he shall not send commissioners to Rome. Such is, and such, we trust in God, ever will be, our opinion. We do not, we cannot, we must not, permit our king to follow measures subversive of that government which we have sworn to maintain, and which we will maintain."

116
A short
truce con-
cluded with
Scotland.

The king entered into a more full refutation of the pope's arguments; and having, as he thought, answered them sufficiently, he marched again into Scotland: but, by the mediation of France, another truce was concluded, to last till St Andrew's day 1302.

117
Three bo-
dies of the
English de-
feated in
one day.

After the expiration of the truce, Edward sent an army into Scotland, under the command of John de Segrave. This general divided his troops into three bodies; but, keeping them so far distant that they could not support each other, they were all engaged and defeated in one day by the Scots, near Roslin (see ROSLIN). This, however, was the last successful exploit of the Scots at this period. The pope deserted them; and the king of France concluded a peace with England, in which all mention of the Scots was industriously avoided; so that they were left alone to bear the whole weight of Edward's resentment, who now invaded their

118
Scotland in-
vaded by
Edward
in person
with a vast
army.

country in person with a mighty army. He met with no resistance in his progress, except from the castle of Brechin, which was commanded by Thomas Maul, a brave and experienced officer. He held out for 20 days against the whole power of the English army; but at last, being mortally wounded, the place capitulated.

From thence he proceeded northward, according to some historians, as far as Caithness. He then returned towards the south, and wintered in Dunfermline. In that place there was an abbey of the Benedictine order; a building so spacious, that, according to an English historian, three sovereign princes with all their retinue might have been lodged conveniently within its precincts. Here the Scottish nobles sometimes held their assemblies. The English soldiers utterly demolished this magnificent fabric.

The only fortresses that remained in the possession of the Scots was the castle of Stirling, where Sir William Oliphant commanded. To protect this single place of refuge, Comyn assembled all his forces. He posted his army on the south bank of the river, in the neighbourhood of Stirling, there to make the last stand for the national liberty. The Scots fondly imagined, that Edward would attempt to force the passage, as the impetuous Cressingham had attempted in circumstances not dissimilar. But the prudence of Edward frustrated their expectations. Having discovered a ford at some distance, he crossed the river at the head of his whole cavalry. The Scots gave way, and dispersed themselves.

119
The Scots
army rout-
ed.

All resources but their own courage had long failed them; that last resource failed them now, and they hastened to conciliate the favour of the conqueror. Previous to this, Bruce had surrendered himself to John de St John, the English warden. Comyn and his followers now submitted to Edward. They stipulated for their lives, liberties, and estates: reserving always to Edward the power of inflicting pecuniary mulcts on them as he should see fit.

120
Capitula-
tion with
Edward.

From the general conditions of this capitulation, the following persons were excepted: Wisheart bishop of Glasgow, the Steward, Sir John Soulis, David de Graham, Alexander de Lindesay, Simon Fraser, Thomas Bois, and Wallace. With respect to them, it was provided, that the bishop of Glasgow, the Steward, and Soulis, should remain in exile for two years, and should not pass to the north of Trent; that Graham and Lindesay should be banished from Scotland for six months; that Fraser and Bois should be banished for three years from all the dominions of Edward, and should not be permitted, during that space, to repair to the territories of France. "As for William Wallace, it is agreed, that he shall render himself up at the will and mercy of our sovereign lord the king, if it shall seem good to him." These were all the conditions that the Scottish nation stipulated for the man who had vanquished the English at Stirling, who had expelled them from Scotland, and who had once set his country free!

Amid this wreck of the national liberties, Wallace scorned submission. He lived a free man: a free man he resolved to die. Fraser, who had too oft complied with the times, now caught the same heroic sentiments. But their endeavours to rouse their countrymen were in vain. The season of resistance was past. Wallace perceived that there remained no more hope; and sought out a place of concealment, where, eluding the vengeance of Edward, he might silently lament over his fallen country.

Edward assembled at St Andrew's what is called a parliament.

Scotland. parliament. Wallace, Fraser, and the garrison of Stirling, were summoned to appear: They appeared not, and sentence of outlawry was pronounced against them.

121
The castle of Stirling reduced, and Scotland subdued.

Edward now prepared to besiege the castle of Stirling; and, foreseeing that the reduction of this place would be attended with considerable difficulty, he stripped the abbey of St Andrew's of the lead which covered it, in order to employ the metal in bullets for his battering machines. Oliphant was solemnly summoned to surrender; but in vain. Edward drew out all his artillery, and battered the walls with stones of 200 pounds weight. The besieged, however, defended themselves with obstinacy, and killed a great number of the English: but at last they were obliged to surrender: and Edward, looking upon the conquest of Scotland as now complete, set out for York, and from thence to Lincoln.

122
Edward attempts an union between the two kingdoms in vain.

Though Edward had thus met with all the success he could desire in his expeditions against the Scots, he could not but perceive that his dominion over them must be very precarious, as long as he held them in the subjection of a conquered people. He resolved therefore once more to renew his attempts for an union of the two kingdoms. He began with taking into favour the bishop of Glasgow, Robert Bruce, and John Mowbray, who, next to Bruce and the Cummings, was amongst the greatest of the Scottish nobility. To them he recommended the settling the affairs of their country, but in such a manner as to leave it in his power to effect the proposed union with England. This scheme, however, was by no means agreeable to Bruce; who had now no other competitor for the crown but Cumming, who was in a great measure incapable of opposing his designs: neither indeed could it ever be made agreeable to the bulk of the nation; and therefore came to nothing at last. Scotland, however, was subdued. Its inhabitants had renounced every idea of asserting their liberty, and only strove to make their court to the conqueror. Wallace alone remained an exception. Edward, who had received into favour those who had proved traitors over and over again, showed a mean revenge against the only man who discovered a steady and honourable spirit, and whose friendship seemed worth the courting. Ralph de Haliburton, a prisoner, offered his assistance for discovering Wallace; and for this purpose he was granted a temporary liberty: but what he did in this very dishonourable employment is unknown. Certain it is that Wallace was discovered, and betrayed into the hands of the English, by Sir John Menteith, as is commonly supposed; who is also said to have been the intimate friend of Wallace, though without any just foundation. Be this as it will, however, this celebrated and heroic patriot was arraigned at Westminster as a traitor to Edward, and as having burnt villages, stormed castles, and slaughtered many subjects of England. Wallace denied his ever having been a traitor, and indeed with truth; for he had always been the avowed enemy of Edward, and had not at any time owned allegiance to him. But whatever his defences might have been, they were of no avail with a judge who had resolved on his destruction. Wallace was condemned to die a traitor's death, and the sentence was executed with the utmost rigour! In his last moments he asserted that independency which a degenerate nation had renounced. His head was placed on a pinnacle at Lon-

123
Wallace betrayed, and executed.

don, and his mangled limbs were distributed over the kingdom.

Scotland.

After the death of Wallace, Edward thought of nothing but settling the affairs of Scotland as a conquered country; however, he took care to preserve the ancient forms as far as was consistent with the dependent state of the nation. It has been said, indeed, that Edward abrogated all the Scottish laws and customs, and endeavoured to substitute the English in their stead; but this is denied by others. Lord Hailes gives us at length the record with respect to these laws, in the following words. "And, with respect to the laws and usages of the government of Scotland, it is ordained, that the *custom of the Scots and the Brets* shall for the future be prohibited, and be no longer practised. It is also ordained, that the king's lieutenant shall forthwith assemble the good people of Scotland: and that, at such assembly, shall be read over the statutes made by David king of Scots, and also the additions and amendments which have been made by other kings; and that the lieutenant, with the assistance which he shall then have, as well of Englishmen as of Scots, shall amend such of these statutes and usages as are plainly against the laws of God and reason, as they best may in so short a space, and in so far as they can without consulting the king; and as to matters which they cannot undertake to correct of themselves, that they be put in writing, and laid before the king by the lieutenant, and any number of commissioners, with parliamentary powers, whom the Scots shall think fit to choose. That they shall meet with commissioners appointed by the king, and finally determine as to the premises."

124
Edward's precautions for settling the Scots affairs.

This is the record by which it is generally supposed that the law of Scotland was abrogated. But Lord Hailes is of opinion, that the *usage of the Scots and Brets* here mentioned was something different from the common law of the land. "We know (says he), from our statute-book, that the people of Galloway had certain usages peculiar to themselves; *Stat. Alex. II. c. 2.* One was, that causes were tried among them without juries [*Quon. Attach. c. 72. 73.* placed in some ancient MSS. among LL. David I. c. 15.], and this may probably have been the usage which Edward abolished. The people of Galloway were sometimes distinguished by the name of *Scots*: thus the *wild Scot of Galloway* is an expression to be found in ancient instruments, and is proverbial even in our own days. *The usage of the Brets*, I take to be what relates to the judge called *brithibb*, or *brehan*; in Ireland, *brehan*; and consequently, that the thing here abolished was the commutation of punishments by exacting a pecuniary mulct."

125
Did not abrogate the ancient laws.

An indemnity was now granted to the Scots upon certain conditions. Various fines were imposed, from one to five years rent of the estates of the delinquents. One year's rent was to be paid by the clergy, excluding the bishop of Glasgow; two by those who were more early in their submissions than Comyn; three by Comyn and his associates, and by the bishop of Glasgow; four years rent was to be paid by William de Baliol and John Wisheart; and five by Ingelram de Umfraville, because they had stood out longer. Three years rent was also paid by the vassals of Baliol, Wisheart, and Umfraville. These fines were to be paid in moieties. The person taxed was to pay half his income annually: and thus Umfraville, taxed in five years rent, was allowed

126
Indemnity granted to the Scots.

Scotland. lowed ten years to discharge the fine. This was an express reservation to Edward of all the royal demesnes which Baliol might have alienated. There was also an exception for those who were already in custody, and those who had not yet submitted.

127
Overthrow
of the Eng-
lish govern-
ment.

Thus, after a long and obstinate contest, was Scotland wholly reduced under the dominion of Edward. — Within *four months* that system was overthrown, which the incessant labour of *fifteen years* had established by craft, dissimulation, and violence, with a waste of treasure, and the effusion of much blood. The causes of this event are related as follows. Derverguill of Galloway had a son, John Baliol, and a daughter named Marjory. John Comyn was the son of Marjory, and, setting Baliol aside, was heir to the pretensions of Derverguill. He had for many years maintained the contest against Edward; but at last laid down his arms, and swore fealty to the conqueror; and as Baliol had repeatedly renounced all pretensions to the crown of Scotland, Comyn might now be considered as the rightful heir. His rival in power and pretensions was Bruce earl of Carrick. This young nobleman's grandfather, *the competitor*, had patiently acquiesced in the award of Edward. His father, yielding to the times, had served under the English banners. But young Bruce had more ambition, and a more restless spirit. In his earlier years he acted upon no regular plan. By turns the partizan of Edward and the viceroy of Baliol, he seems to have forgotten or stifled his pretensions to the crown. But his character developed itself by degrees, and in maturer age became firm and consistent. According to the traditionary report, Bruce made the following proposal to Comyn: "Support my title to the crown, and I will give you my estate; or give me your estate, and I will support your's." The conditions were properly drawn out and signed by both parties; but Comyn, either through fear or treachery, revealed the whole to Edward. On this the king showed Bruce the letters of his accuser, and questioned him very hard; but the latter found means to pacify him by mild and judicious answers. Notwithstanding this, however, Edward still suspected him, though he dissembled his sentiments, until he should get the brothers of Bruce into his power, and then destroy all the family at once. The king having drank freely one evening, informed some of his lords that he had resolved to put Bruce to death next day. The earl of Gloucester, hearing this resolution, sent a messenger to Bruce, with twelve pence and a pair of spurs, as if he had meant to restore what he had borrowed. Bruce understood the meaning of his message, and prepared for flight. The ground was covered with snow, which would have discovered his flight; but, it is said, that Bruce ordered his farrier to invert the shoes of his horses, and immediately set out for Scotland in company with his secretary and groom. In his way he observed a foot-passenger whose behaviour seemed to be suspicious, and whom he soon discovered to be the bearer of letters from Comyn to the English monarch, urging the death or immediate imprisonment of Bruce. The latter, filled with resentment, immediately beheaded the messenger, and set forward to his castle of Lochmaben, where he arrived the seventh day after his departure from London. Soon after this he repaired to Dumfries, where Comyn happened at that time to reside. Bruce requested an interview with him

118
Edward's
designs
against the
family of
Bruce.

129
Robert
Bruce
makes his
escape,

in the convent of the Minorites, where he reproached him with his treachery. Comyn gave him the lie, and Bruce instantly stabbed him; after which he hastened out of the convent, and called "To horse." His attendants, Lindefay and Kirkpatrick, perceiving him pale, and in extreme agitation, inquired how it was with him? "Ill (replied Bruce); I doubt I have slain Comyn." "You doubt!" cried Kirkpatrick; on saying which, he rushed into the place where Comyn lay, and instantly dispatched him. Sir Robert Comyn, a relation, attempted to defend his kinsman, and shared his fate. Bruce had now gone so far, that it was in vain to think of retracting; and therefore set himself in opposition to Edward in good earnest. The justiciaries were then holding their court at Dumfries; who hearing what had happened, imagined their own lives to be in danger, and barricaded the doors. Bruce ordered the house to be set on fire: upon which they surrendered; and Bruce granted them leave to depart out of Scotland without molestation.

130
And kills
John Co-
myn.

The above account of this catastrophe is taken from the Scots historians; those of England differ in many particulars. Lord Hailes supposes both to be wrong, and that the true circumstances of the quarrel are unknown. "My opinion (says he) is, that Bruce, when he met Comyn at Dumfries, had no intention of embroiling his hands in his blood, nor any immediate purpose of asserting his right to the crown of Scotland; that the slaughter of Comyn was occasioned by a hasty quarrel between two proud-spirited rivals; and that Bruce, from necessity and despair, did then assert his pretensions to the crown."

131
Opinion of
Lord Hailes
concerning
this event.

The death of Comyn affected the Scots variously, according to their different views and interests. The relations of the deceased viewed it as a cruel assassination, and joined with Edward in schemes of revenge. Some who wished well to the peace of their country, thought that it was better to submit quietly to the government of the English, than to attempt a revolution, which could not be effected without much danger and bloodshed; but, on the other hand, the friends of Bruce now saw the necessity they were under of proceeding to the coronation of the new king without loss of time. The ceremony was therefore performed at Scone on the 25th of March 1306, in presence of two earls, the bishops of St Andrew's and Glasgow, the abbot of Scone, John de Athol, and John de Menteith. It had been customary, since the days of Macbeth, for one of the family of Fife to put the crown on the king's head; and Bruce found the prepossession of the Scots in favour of this circumstance so strong, that he was obliged to seek for an expedient to satisfy them. Macduff the earl of Fife was at that time in England, where he had married a near relation of Edward. His sister was wife to the earl of Buchan, one of the heads of the family of Comyn, and consequently the determined enemy of Robert. By an uncommon effort of female patriotism, she postponed all private quarrels to the good of her country, and in her husband's absence repaired, with all his warlike accoutrements, to Bruce, to whom she delivered them up, and placed the crown upon his head. This crown is said to have been made by one Conyers an Englishman, who narrowly escaped being punished for it by Edward.

132
Robert
crowned
king of
Scotland
by a wo-
man.

The king of England received intelligence of all these

Scotland.

133
He is de-
feated at
Methven

proceedings with astonishment; and without delay sent a body of troops under the command of Aymer de Valence earl of Pembroke, to suppress the rebellion. Bruce omitted nothing for his defence. He had always been considered by his countrymen as a promising accomplished young nobleman, but firmly attached to Edward's person and government; for which reason he had not been trusted by those independent patriots who joined Wallace. But their confidence was now gained by his rendering himself so obnoxious to Edward, that no possibility of a reconciliation was left; and he soon saw himself at the head of a small army. With these, who consisted of raw and unexperienced soldiers, Bruce formed a camp at Methven near Perth, which last was the head-quarters of the enemy; but knowing the disadvantage under which he laboured from the inexperience of his men, he resolved to act upon the defensive. The English general at last sent Bruce a challenge to fight him, which was accepted; but the day before the battle was to have been fought by agreement, the Scots were attacked by surprise, and totally defeated. Bruce behaved with the greatest valour, and had three horses killed under him. Being known by the slaughter which he made, John Mowbray, a man of great courage and resolution, rushed upon him, and catching hold of his horse's bridle, cried out, "I have hold of the new-made king!" but he was delivered by Christopher Seaton. Some Scottish historians have asserted, that on this occasion all the prisoners of note were put to death; but others inform us, that though Edward did send orders to that purpose, the English general pardoned all those who were willing to swear fealty to his master: however, it is certain, that after the battle of Methven, many prisoners were hanged and quartered.

134
Is distressed
after this
defeat.

This disaster almost gave the finishing stroke to the affairs of Bruce. He now found himself deserted by a great part of his army. The English had taken prisoners great numbers of women whose husbands followed Bruce; and all those were now ordered, on pain of death, to accompany their husbands. Thus was Bruce burdened with a number of useless mouths, and found it hard to subsist. The consequence was, that most of his men departed with their families, so that in a few days his army dwindled down to 500. With these he retreated to Aberdeen, where he was met by his brother Sir Neil, his wife, and a number of other ladies, all of whom offered to follow his fortune through every difficulty. But, however heroic this behaviour might be, it put Bruce to some inconvenience, as he could scarce procure subsistence; and therefore he persuaded the ladies to retire to his castle of Kildrommey, under the protection of Sir Neil Bruce and the Earl of Athol. In the mean time the desertion among Bruce's troops continued, so that now he had with him no more than 200 men; and as winter was coming on, he resolved to go into Argyleshire, where Sir Neil Campbell's estate lay, who had gone before to prepare for his reception.

135
Reaches
Argyleshire
with great
difficulty.

In his way thither he encountered incredible difficulties; and some of his followers being cut off at a place called *Dalry*, the rest were so disheartened, that they all forsook him, excepting Sir Gilbert Hay, Sir James (sometimes called Lord) Douglas, and a few domestics. Bruce, however, kept up the spirits of his little party by recounting to them the adventures of princes and patriots in circumstances similar to his own. Having

crossed Lochlomond in a small crazy boat, he was discovered by his trusty friend the Earl of Lenox, who had been proscribed in England, and now lived in a kind of exile on his own estate. The meeting between these friends was very affecting, and drew tears from the eyes of all present. Lenox, who had heard nothing of Bruce's misfortunes, furnished him and his half-starved attendants with plenty of provisions: but being soon made sensible that it was impossible for them to live in a place where they were well known, and surrounded by enemies, Bruce resolved to seek out some more safe habitation. For this purpose Sir Neil Campbell had already provided shipping; but our adventurers had scarcely set sail, when they were pursued by a large squadron of the enemy's fleet. The bark which carried the earl of Lenox escaped with the utmost difficulty to Cantire, where Bruce was already landed: and, at their meeting, both agreed that their persons should never afterwards be separated while they remained alive.

Scotland.
136
Meets with
the earl of
Lenox;

137
With
whom he
flies to Can-
tire,

In the mean time Edward having compromised some differences with his English subjects, resumed his old project of entirely subduing Scotland; and his intention now appears to have been to divide the lands of such as he suspected of disaffection among his English followers. He ordered a proclamation to be made, that all who had any title to the honour of knighthood, either by heritage or estate, should repair to Westminster to receive all military ornaments, their horses excepted, from his royal wardrobe. As the prince of Wales came under this denomination, he was the first who underwent the ceremony; which gave him a right to confer the like honour on the sons of above 300 of the chief nobility and gentry of England. The prince then repaired, at the head of this gallant train, to Edward; who received them, surrounded by his nobility, in the most solemn manner. The king then made a speech on the treachery of the Scots, whose entire destruction he vowed. He declared his resolution of once more heading his army in person; and he desired, in case of his death, that his body might be carried to Scotland, and not buried till signal vengeance was taken on the perfidious nation. Having then ordered all present to join him within fifteen days, with their attendants and military equipages, he prepared for his journey into Scotland. He entered the country soon after Bruce's defeat at Methven. The army was divided into two bodies; one commanded by the king himself, the other by the prince of Wales, and, under him, by the earls of Lancaster and Hereford, with orders to proceed northwards, and penetrate into the countries where the interest of Bruce was strongest. As he passed along, Edward caused all that fell into his hands, whom he suspected of favouring Bruce's party, to be immediately executed. The bishop of Glasgow was the only exception to this barbarity; he was taken, but had his life spared on account of his function.

138
Edward's
prepara-
tions for a
new inva-
sion of Scot-
land.

139
Enters the
country,
and be-
lieves with
great cruelties.

In the mean time, as the prince of Wales continued his march northwards, Bruce's queen began to be alarmed for her own safety. She was advised to take sanctuary at the shrine of St Duthac in Ross-shire; but there she was made prisoner by William earl of Ross, who was of the English party. By Edward's order she was sent to London; her daughter, who was taken at the same time, being shut up in a religious house. The

140
Robert's
queen and
daughter
taken pri-
soners.

directions soners.

Scotland.
Fædera,
 Tom. ii.
 p. 1013.

directions for the entertainment of the queen are still preserved †. She was to be conveyed to the manor of Brustewick; to have a waiting-woman and a maid-servant, advanced in life, sedate, and of good conversation: a butler, two men-servants, and a foot-boy for her chamber, sober, not riotous, to make her bed: three greyhounds when she inclines to hunt; venison, fish, and the fairest house in the manor. In 1308, she was removed to another prison; in 1312, she was removed to Windsor castle, 20 shillings per week being allowed for her maintenance. In 1314, she was committed to Rochester castle, and was not set at liberty till the close of that year.

141
 Kildrom-
 mey castle
 taken, and
 the garrison
 massacred.

The only fortress which Bruce possessed in Scotland was the castle of Kildrommey; and it was soon besieged by the earls of Lancaster and Hereford. One Osburn treacherously burnt the magazine; by which means the garrison, destitute of provisions, was obliged to surrender at discretion. The common soldiers were hanged; Sir Neil Bruce and the earl of Athol were sent prisoners to Edward, who caused them to be hanged on a gallows 50 feet high, and then beheaded and burnt. The countess of Buchan, who had crowned King Robert, was taken prisoner; as was Lady Mary Bruce, the king's sister. Some historians say, that Edward ordered these two ladies to be shut up in wooden cages, one to be hung over the walls of the castle of Roxburgh, and the other over those of Berwick, as public spectacles: but Lord Hailes only tells us, that the countess of Buchan was put into close confinement in the castle of Berwick (F).

142
 Adventures
 of Robert.

About this time also many others of Bruce's party

were put to death; among whom were Thomas and Alexander Bruce, two of the king's brothers, and John Wallace, brother to the celebrated Sir William. Bruce himself, in the mean time, was in such a despicable situation, that it was thought he never could give more disturbance; and it was even reported that he was dead. All his misfortunes, however, could not intimidate him, or prevent his meditating a most severe revenge upon the destroyers of his family. He first removed to the castle of Dumbarton, where he was hospitably received and entertained by Angus lord of Kintyre; but, suspecting that he was not safe there, he sailed in three days to Rachrin, a small island on the Irish coast, where he secured himself effectually from the pursuit of his enemies. It was during his stay in this island, that the report of his death was generally propagated. Notwithstanding this, his party increased considerably; and, even when he landed on this island, he was attended by 300 men. However, after having lived for some time in this retreat, being apprehensive that the report of his death might be generally credited among his friends in Scotland, it was resolved to attempt the surprise of a fort held by the English under Sir John Hastings, on the isle of Arran. This was performed with success by his two friends Douglas and Sir Robert Boyd, who put the greatest part of the garrison to the sword. The king, hearing of their success, passed over into Arran; but, not knowing where his people resided, is said to have found them out by blowing a horn. He then sent a trusty servant, one Cuthbert, into his own country of Carrick; with orders, in case he found it well affected

Scotland.

143
 He takes a
 fort on the
 isle of Ar-
 ran.

5 C 2

to

(F) M. Westminster, p. 455. says, "Capitur etiam et illa impiissima conjuratrix de Buchan, de qua consultus Rex, ait, Quia gladio non percussit, gladio non peribit; verum, propter illicitam conjurationem quam fecit, in domicilio lapideo et ferreo, in modum coronæ fabricato, firmissime obstruatur, et apud Bervicum sub dio forinsecus suspendatur, ut sit data, in vita et post mortem, speculum viatoribus, et opprobrium sempiternum." Other English historians, copying M. Westminster, have said the same thing. We cannot, therefore, blame Abercrombie for saying, "She was put in a wooden cage shaped like a crown, and in that tormenting posture hung out from high walls or turrets to be gazed upon and reproached by the meanest of the multitude." Vol. I. p. 579. Hemingford, Vol. I. p. 221. relates the story in a manner somewhat different. He says, that the earl of Buchan her husband sought to kill her for her treason; but that Edward restrained him, and ordered her to be confined in a wooden cage.

The intentions of Edward I. touching the durance of the countess of Buchan, will be more certainly learned from his own orders, than from the report of M. Westminster. His orders run thus: "By letters under the privy-seal, be it commanded, that the chamberlain of Scotland, or his deputy at Berwick upon Tweed, do, in one of the turrets of the said castle, and in the place which he shall find most convenient, cause construct a cage strongly latticed with wood (*de fuiss*, i. e. beams of timber or palisades), cross-barred, and secured with iron, in which he shall put the countess of Buchan. And that he take care that she be so well and safely guarded therein, that in no sort she may issue therefrom. And that he appoint one or more women of Berwick, of English extraction, and liable to no suspicion, who shall minister to the said countess in eating and drinking, and in all things else convenient, in her said lodging place. And that he do cause her to be so well and strictly guarded in the cage, that she may not speak with any one, man or woman, of the Scottish nation, or with any one else, saving with the women who shall be appointed to attend her, or with the guard who shall have the custody of her person. And that the cage be so constructed, that the countess may have therein the convenience of a decent chamber (*element de chambre courtoise*); nevertheless, that all things be so well and surely ordered, that no peril arise touching the right custody of the said countess. And that he to whom the charge of her is committed shall be responsible, body for body; and that he be allowed his charges." *Fædera*, T. ii. p. 1014.

Such were the orders of Edward I. and he surely was not a man who would suffer his orders to be disobeyed. Here, indeed, there is a detail concerning the custody of a female prisoner, which may seem ridiculously minute, but which is inconsistent with the story related by M. Westminster and other historians. To those who have no notion of any cage but one for a parrot or a squirrel, hung out at a window, we despair of rendering this mandate intelligible.

Scotland. to his cause, to light a fire on a certain point near his castle of Tunberry, whence it could be discerned in Arran. Bruce and his party perceived the signal, as they thought, and immediately put to sea. Their voyage took up but little time; and as Bruce had now 400 men along with him, he resolved immediately to act on the offensive. His first exploit was to surprise his own castle of Tunberry, which had been given, along with Bruce's estate, to lord Henry Percy. Him he drove out, along with the English garrison; but, in the mean time, he met with his servant Cuthbert, who gave him disagreeable intelligence. This man had met with very little encouragement on his landing in Scotland; in consequence of which he had not lighted the fire agreed upon as a signal of his success, that which Bruce had observed having been kindled by accident. He also told him, that the English were in full possession of the country, and advised his master to be upon his guard. Soon after this the king was joined by a lady of fortune, who brought along with her 40 warriors. By her he was first particularly informed of the miserable fate of his family and relations; which, instead of disheartening, animated him the more with a desire of revenge. However, he did not immediately attempt any thing himself, but allowed Douglas to attempt the recovery of his estate of Douglas-dale, as Bruce himself had recovered his in Carrick. In this expedition Douglas was joined by one Thomas Dickson, a man of considerable fortune, and who gave him intelligence concerning the state of the country. By his advice he kept himself private till Palm Sunday; when he and his followers with covered armour repaired to St Bride's church, where the English were performing divine service. The latter were surprised, but made a brave defence; though, being overpowered by numbers, they were at last obliged to yield. Douglas, without farther resistance, took possession of his own castle, which he found well furnished with arms, provisions, and money. He destroyed all that he could not carry with him, and also the castle itself, where he knew that he must have been besieged if he had kept it.

144
And the
castle of
Tunberry
in Carrick.

145
Douglas re-
covers his
own estate.

While Bruce and his friends were thus signalizing themselves, and struggling with the English under so many disadvantages, it is natural to think that they must have met with many dangerous and difficult adventures. Many of these, indeed, are related by the Scots historians; but most of them have the appearance of fables, and it is now impossible to distinguish the true from the false; for which reason we shall pass them all over in silence, confining ourselves only to those facts which are at once important and well authenticated.

In 1307, the earl of Pembroke advanced into the west of Scotland to encounter Bruce. The latter did not decline the combat; and Pembroke was defeated. Three days after this, Bruce defeated with great slaughter another English general named Ralph de Monthermer, and obliged him to fly to the castle of Air. The king laid siege to the castle for some time, but retired at the approach of succours from England. This year the English performed nothing, except burning the monastery at Paisley. Edward, however, resolved still to execute his utmost vengeance on the Scots, though he had long been retarded in his operations by a tedious and dangerous indisposition. But now, sup-

146
The Eng-
lish twice
defeated by
Robert,

posing that his malady was decreased so far that he could safely proceed on his march, he offered up the horse-litter, in which he had hitherto been carried, in the cathedral church of Carlisle; and, mounting himself on horseback, proceeded on the way towards Solway. He was so weak, however, that he could advance no farther than six miles in four days; after which he expired in sight of Scotland, which he had so often devoted to destruction. With his dying breath he gave orders that his body should accompany his army into Scotland, and remain unburied until the country was totally subdued; but his son, disregarding this order, caused it to be deposited in Westminster abbey.

The death of such an inveterate enemy to the Scottish name, could not fail of raising the spirits of Bruce and his party; and the inactive and timid behaviour of his son Edward II. contributed not a little to give them fresh courage. After having granted the guardianship of Scotland to his favourite Piers de Gaveston earl of Pembroke, whom his father had lately banished, he advanced to Cumnock, on the frontiers of Airshire, and then retreated into England; conferring the office of guardian of Scotland upon John de Bretagne earl of Richmond, a fortnight after he had bestowed it on Gaveston. He was no sooner gone than Bruce invaded Galloway. The inhabitants refusing to follow his standard, he laid waste the country; but was defeated, and obliged to retire northwards by the guardian. In the north he over-ran the country without opposition; and soon began to move southwards again in order to repair his late disgrace. He was encountered by Comyn earl of Buchan with an undisciplined body of English, whom he entirely defeated and dispersed. But about this time he was seized with a grievous distemper, which weakened him so much, that no hopes were left of his recovery. In this enfeebled situation, he was attacked by the earl of Buchan and John Mowbray an English commander, who had assembled a body of troops in order to efface their late dishonour. The armies met at Inverury in Aberdeenshire. Bruce was too weak to support himself, and therefore was held upon horseback by two attendants: but he had the pleasure of seeing his enemies totally defeated, and pursued with great slaughter for many miles; and it is reported, that the agitation of his spirits on that day proved the means of curing him of his disease. This battle was fought on the 22d of May 1308.

The king of Scotland now took revenge of his enemies, after the manner of that barbarous age, by wasting the country of Buchan with fire and sword. His successes had so raised his character, that many of the Scots who had hitherto adhered to the English cause, now came over to that of Robert. Edward, the king's brother, invaded Galloway, and defeated the inhabitants of that country. John de St John, an English commander, with 1500 horsemen, attempted to surprise him; but Edward having received timely information of his designs, ordered the infantry and meaner part of his army to entrench themselves strongly, while he himself, with no more than 50 horsemen, well armed, under cover of a thick mist, attacked his enemies, and put them to flight. After this he reduced all the fortresses in the country, and totally expelled the English from it. About this time also, Douglas, when roving about the mountainous

147
Death of
Edward I.

148
Robert de-
feated in
Galloway.

149
He defeats
the English
in his turn,
and reco-
vers from a
dangerous
disease.

150
Successes of
Edward
Bruce,

Scotland, tainous parts of Tweeddale, surprised and made prisoners Thomas Randolph the king's nephew, and Alexander Stewart of Bonkhill, who had hitherto continued inimical to the interests of Robert. Randolph was conducted to the king, but talked to him in an haughty strain; upon which his uncle put him into close confinement.

151
The lord
of Lorn de-
feated, and
his castle
taken.

The next exploit of Robert was against the lord of Lorn, a division of Argyleshire. It was this nobleman who had reduced the king to such straits after his defeat at Methven; and he now resolved to take ample revenge. Having entered the country, the king arrived at a narrow pass, where the troops of Lorn lay in ambush. This pass had a high mountain on the one side, and a precipice washed by the sea on the other; but Robert having ordered Douglas to make a circuit and gain the summit of the mountain with part of the army, he entered himself with the rest. He was immediately attacked; but Douglas with his men rushed down the hill, and decided the victory in favour of the king; who soon after took the castle of Dunstaffnage, the chief residence of this nobleman.

152
Unsuccess-
ful negoti-
ations for
peace.

While Robert and his associates were thus gaining the admiration of their countrymen by the exploits which they daily performed, the English were so unsettled and fluctuating in their counsels, that their party knew not how to act. Edward still imagined that there was a possibility of reconciling the Scots to his government: and for this purpose he employed William de Lambyrton, bishop of St Andrew's, who, after having been taken prisoner, and carried from one place of confinement to another, had at last made such submissions, as procured first his liberty, and then the confidence of Edward. This ecclesiastic having taken a most solemn oath of fidelity to Edward, now resolved to ingratiate himself, by publishing against Robert and his adherents a sentence of excommunication, which had been resolved on long before. This, however, produced no effect; and the event was, that in 1309, through the mediation of the king of France, Edward consented to a truce with the Scots. This pacific disposition, however, lasted not long. The truce was scarcely concluded, when Edward charged the Scots with violating it, and summoned his barons to meet him in arms at Newcastle: yet, probably being doubtful of the event of the war, he empowered Robert de Umfraville, and three others, to conclude a new truce; declaring, however, that he did this at the request of Philip king of France, as his dearest father and friend, but who was in no sort to be considered as the ally of Scotland.

153
Edward
invades
Scotland
without
success.

The new negotiations were soon interrupted. They were again renewed; and in the beginning of the year 1310 the truce was concluded, but entirely disregarded by the Scots. The progress of Bruce now became very alarming. The town of Perth, a place at that time of great importance, was threatened; and to relieve it, Edward ordered a fleet to sail up the river Tay: he also commanded the earl of Ulster to assemble a body of troops at Dublin, and from thence to invade Scotland; his own barons were ordered to meet him in arms at Berwick. About the end of September, he entered Scotland; passed from Roxburgh, through the forest of Selkirk, to Biggar; from thence he penetrated into Renfrew; and turning back by the way of

Linlithgow, he retreated to Berwick, where he continued inactive for eight months.

Scotland.

During this invasion, Robert had carefully avoided a battle with the English; well knowing, that an invasion undertaken in autumn would ruin the heavy-armed cavalry, on which the English placed their chief dependence. His cause was also favoured by a scarcity which prevailed at this time in Scotland; for as magazines and other resources of modern war were then unknown, the English army were greatly retarded in their operations, and found it impossible to subsist in the country.

The spirit of enterprise had now communicated itself to all ranks of people in Scotland. In 1311, the castle of Linlithgow was surprised by a poor peasant, named *William Binnock*. The English garrison were secure, and kept but a slight guard; of which Binnock being informed, concealed eight resolute men in a load of hay, which he had been employed to drive into the castle. With these, as soon as the gate was opened, he fell upon the feeble guard, and became master of the place; which was dismantled by Robert, as well as all the other castles taken in the course of the war.

154
Linlithgow
castle sur-
prised by
the Scots.

Edward now resolved to invade Scotland again; and for this purpose ordered his army to assemble at Roxburgh. But Robert, not contented with defending his own country, resolved in his turn to invade England. He accordingly entered that country, and cruelly ravaged the bishopric of Durham. He returned loaded with spoil, and laid siege to Perth. After remaining six weeks before that place, he raised the siege, but returned in a few days; and having provided scaling ladders, approached the works with a chosen body of infantry. In a dark night he made the attack; and having waded through the ditch though the water stood to his throat, he was the second man who reached the top of the walls. The town was then soon taken; after which it was plundered and burnt, and the fortifications levelled with the ground. This happened on the 8th of January 1312.

155
Robert in-
vades Eng-
land, and
takes Perth
on his re-
turn.

Edward was now become averse to the war, and renewed his negotiations for a truce; but they still came to nothing. Robert again invaded England; burnt great part of the city of Durham; and even threatened to besiege Berwick, where the king of England had, for the time, fixed his residence. He next reduced the castles of Butel, Dumfries, and Dalswinton, with many other fortresses. The castle of Roxburgh, a place of the utmost importance, next fell into his hands. The walls were scaled while the garrison was revelling on the eve of Lent. They retreated into the inner tower; but their governor, a Frenchman, having received a mortal wound, they capitulated.

156
Invades
England a
second time
with great
success.

Randolph, the king's nephew, who had been imprisoned, as we have already observed, was now received into favour, and began to distinguish himself in the cause of his country. He blockaded the castle of Edinburgh so closely, that all communication with the neighbouring country was cut off. The place was commanded by one Leland, a knight of Gascony; but the garrison suspecting his fidelity, imprisoned him in a dungeon, and chose another commander in his stead. One William Frank presented himself to Randolph, and informed him how the walls might be scaled. This man in his youth had resided in the castle; and having

157
The Castle
of Elin-
burgh ta-
ken by
Randolph.

Scotland, an intrigue with a woman in the neighbourhood, had been accustomed to descend the wall, during the night, by means of a ladder of ropes; whence, by a steep and difficult path, he arrived at the foot of the rock. Randolph himself, with 30 men, undertook to scale the castle walls at midnight. Frank was their guide, who still retained a perfect memory of the path, and who first ascended the wall. But before the whole party could reach the summit, an alarm was given, the garrison ran to arms, and a desperate combat ensued. The English fought valiantly till their commander was killed; after which they threw down their arms. Leland, the former governor, was released from his confinement, and entered into the Scottish service.

158 Robert in-
vades Eng-
land, and
reduces the
isle of Man.
In 1313, king Robert found the number of his friends increasing with his successes. He was now joined by the earl of Athol, who had lately obtained a grant of lands from Edward. This year, through the mediation of France, the conferences for a truce were renewed. These, however, did not retard the military operations of the Scots. Cumberland was invaded and laid waste: the miserable inhabitants besought Edward's protection; who commended their fidelity, and desired them to defend themselves. In the mean time, Robert, leaving Cumberland, passed over into the isle of Man, which he totally reduced. Edward found great difficulties in raising the supplies necessary for carrying on the war; but at last overcame all these, and, by the beginning of the year 1314, was prepared to invade Scotland with a mighty army. In March he ordered his ships to be assembled for the invasion; invited to his assistance Eth O'Connor, chief of the Irish of Connaught, and 26 other Irish chiefs; summoned them and his subjects in Ireland to attend his standard, and gave the command of these auxiliaries to the earl of Ulster. His barons were summoned to meet him at Berwick on the 11th of June; and 22,000 foot-soldiers, from the different counties of England and Wales, were required by proclamation to assemble at Wark.

159 Edward
Bruce en-
ters into an
imprudent
treaty with
the gover-
nor of Stir-
ling.
In the mean time, the successes of the Scots continued. Edward Bruce had reduced the castles of Rutherglen and Dundee, and laid siege to the castle of Stirling. The governor of the place agreed to surrender, if he was not relieved before the 24th of June 1314; and to this Edward agreed, without consulting his brother. The king was highly displeased with this rash treaty, which interrupted his own operations, allowed the English time to assemble their utmost force, and at last obliged him either to raise the siege or to put all on the event of a single battle. However, he resolved to abide by the agreement, and to meet the English by the appointed day. Having appointed a general rendezvous of his forces between Falkirk and Stirling, he found their number to amount to somewhat more than 30,000, besides upwards of 15,000 of an undisciplined rabble that followed the camp. He determined to wait the English in a field which had the brook or *burn* of Bannock on the right, and Stirling on the left. His chief dread was the strength and number of the English cavalry, and these he took every method to oppose. The banks of the brook were steep in many places, and the ground between it and Stirling was partly covered with wood. The king commanded many pits, of about a foot in breadth and two or three feet deep, to be dug in all places where ca-

160 Which
brings on
the decisive
engage-
ment of
Bannock-
burn.

valry could have access. From the description given of them by the historians of those times, there seem to have been many rows of them, with narrow intervals. They were carefully covered with brushwood and sod, so that they would easily be overlooked by a rash and impetuous enemy. It is said by some authors, that he also made use of caltrops, to annoy the horses in the most effectual manner.

On the 23d of June, the Scots received intelligence of the approach of Edward, and prepared to decide the fate of their country. The front of their army extended from the brook called *Bannockburn* to the neighbourhood of St Ninians, pretty nearly upon the line of the present turnpike-road from Stirling to Kilsyth; and the stone in which the king is said to have fixed his standard is still to be seen. Robert commanded all his soldiers to fight on foot. He gave the command of the centre to Douglas, and Walter the young steward of Scotland; his brother Edward had the command of the right wing, and Randolph of the left; the king himself taking charge of the reserve, which consisted of the men of Argyle, Carrick, and the islanders. In a valley to the rear, said to be to the westward of a rising ground now called *Gilles-bill*, he placed the baggage, and all the useless attendants on his army.

Randolph was commanded to be vigilant in preventing the English from throwing succours into the castle of Stirling; but 800 horsemen, commanded by Sir Robert Clifford, made a circuit by the low grounds to the east, and approached the castle. The king, perceiving their motions, chid Randolph for his inadvertency, on which the latter hastened to encounter that body. As he advanced, the English wheeled to attack him. Randolph drew up his men in a circular form, holding out their spears on every side. At the first onset Sir William Daynecourt, an English commander of distinguished valour, was killed; but Randolph, who had only a small party with him, was surrounded on all sides, and in the utmost danger. Douglas perceived his danger, and requested the king to let him go to his assistance. Robert at first refused, but afterwards consented with reluctance. Douglas set out without delay; but as he approached he saw the English falling into disorder; upon which he called to his men to stop, and not diminish the glory of Randolph and his men by sharing their victory.

Robert was in the front of the line when the vanguard of the English appeared. He was meanly dressed, with a crown above his helmet, and a battle ax in his hand. Henry de Bohun, an English knight, armed cap-a-pee, rode forward to encounter him. Robert did not decline the combat, and struck his antagonist so violently with his battle-ax, that he is said to have cleft him down to the chin; after which the English vanguard retreated in confusion. The Scottish generals are said to have blamed their king for his rashness in thus encountering Bohun; and he himself, conscious of the justice of their charge, only replied, "I have broke my good battle-ax."

On Monday the 24th of June, the whole English army moved on to the attack. The van, consisting of archers and lancemen, was commanded by Gilbert de Clare earl of Gloucester, nephew to the English king, and Humphry de Bohun constable of England; but the ground was so narrow, that the rest of the army had not sufficient

161 Disposition
of the
Scots.

162 A party of
English ca-
valry de-
feated by
Randolph.

163 An Eng-
lish knight
killed in
single com-
bat by king
Robert.

164 Comman-
ders of the
English ar-
my.

Scotland. sufficient room to expand itself; so that it appeared to the Scots as consisting of one great compact body. The main body was brought up by Edward in person, attended by Aymer de Valence earl of Pembroke, and Sir Giles d'Argentine, two experienced commanders. Maurice abbot of Inchaffray, placing himself on an eminence, celebrated mass in the sight of the Scottish army. He then passed along the front, barefooted, with a crucifix in his hands, and in few words exhorted the Scots to fight for their rights and liberty. The Scots fell down on their knees; which being perceived by Edward, he cried out, "They yield! See, they implore mercy." "They do," answered Umfraville, one of his commanders, "they do implore mercy, but not from us. On that field they will be victorious or die."

165
The English entirely defeated.

As both parties were violently exasperated against each other, the engagement began with great fury. The king of Scotland, perceiving that his troops were grievously annoyed by the English archers, ordered Sir Robert Keith the marischal, with a few armed horsemen, to make a circuit and attack the archers in flank. This was instantly accomplished; and as the weapons of the archers were useless in a close encounter, they could make very little resistance, at the same time that their flight spread disorder through the whole army.

Robert now advanced with the reserve: the whole English army was in the utmost confusion; for the defeat of the archers had decided the victory in favour of the Scots. The young and gallant earl of Gloucester attempted to rally the fugitives, but was thrown from his horse, and cut in pieces, which increased the general confusion. At this critical moment, the numerous attendants on the Scottish camp, prompted by curiosity or the desire of plunder, issued from their retirement. The English mistook them for a body of fresh troops coming to the assistance of their enemies, and fled with precipitation on all sides. Many sought refuge among the rocks in the neighbourhood of Stirling castle, and many were drowned in the rivers. Pembroke and Sir Giles d'Argentine had never quitted Edward during the action; but now, seeing the battle irretrievably lost, Pembroke constrained the king to quit the field. D'Argentine refused to fly. He was a man of great valour, and had a high reputation in Scotland. According to the vulgar opinion, the three most eminent worthies in that age were the emperor Henry of Luxemburg, Robert Bruce, and Giles d'Argentine. He is said to have thrice encountered two Saracen warriors in Palestine, and to have killed them both each time. His valour now availed him but little; for rushing into the midst of the Scots army, he was instantly cut in pieces. Douglas, with 60 horsemen, pursued Edward close. At the Torwood he met Sir Lawrence Abernethy, who was hastening to the English rendezvous with twenty horsemen. The latter soon abandoned the cause of the vanquished, and joined Douglas in the pursuit of Edward, who fled to Linlithgow. He had scarcely arrived there, when he was alarmed by the approach of the Scots, and again obliged to fly. Douglas and Abernethy followed him with such assiduity, that (as Lord Hailes chooses to Latinize the expression of an ancient historian) *ne vel mingendi locus concederetur*; but, notwithstanding their utmost efforts, Edward got safe to Dunbar, where he was received by the earl of March, who protected him till he could be conveyed by sea to England.

Such was the decisive battle of Bannockburn, the greatest defeat the English ever sustained from the Scots. On the side of the latter no persons of note were slain, excepting Sir William Vipont, and Sir Walter Ross the favourite of Edward Bruce; and so grievously was Edward afflicted by the death of this man, that he exclaimed, "O that this day's work were undone, so Ross had not died!" On the English side were slain 27 barons and bannerets, and 22 taken prisoners; of knights there were killed 42, and 60 taken prisoners; of esquires there fell 700; but the number of the common men who were killed or taken was never known with any certainty. The Welsh who had served in the English army were scattered over the country, and cruelly butchered by the Scottish peasants. The English, who had taken refuge among the rocks in the neighbourhood of Stirling, surrendered at discretion: the castle was surrendered, and the privy-seal of England fell into the hands of the king of Scots. The spoils of the English camp were immense, and enriched the conquerors, along with the ransom of many noble prisoners who fell into their hands. Robert showed much generosity in his treatment of the prisoners who fell to his share. He set at liberty Ralph de Monthermer, and Sir Marmaduke Twerge, two officers of high rank, without ransom; and by humane and generous offices alleviated the misfortune of the rest. The dead bodies of the earl of Gloucester and the lord Clifford were sent to England, that they might be interred with the usual solemnity. There was one Baſton, a Carmelite friar and poet, whom Edward is said to have brought with him in his train to be spectator of his achievements, and to record his triumphs. Baſton was made prisoner, and obliged to celebrate the victory of Robert over the English. This he did in wretched Latin rhymes; which, however, procured his liberty. After the battle of Bannockburn, the earl of Hereford retreated to the castle of Bothwell, where he was besieged by Edward Bruce, and soon obliged to surrender. He was exchanged for the wife, sister, and daughter of the king, the young earl of Marr, and the bishop of Glasgow.

Scotland.

167
Loss of the English in the battle of Bannockburn.

168
The king's family set at liberty.

The terror of the English after the defeat at Bannockburn is almost incredible. Walsingham asserts, that many of them revolted to the Scots, and assisted them in plundering their own country. "The English," says he, "were so bereaved of their wonted intrepidity, that an hundred of that nation would have fled from two or three Scotsmen." Edward Bruce and Douglas entered England on the eastern side, ravaged Northumberland, and laid the bishopric of Durham under contribution. From thence they proceeded to Richmond, laid Appleby and some other towns in ashes, and returned home loaded with plunder. Edward summoned a parliament at York, in order to concert means for the public security; and appointed the earl of Pembroke, formerly the guardian of Scotland, to be guardian of the country between the Trent and the Tweed. Robert, however, sent ambassadors to treat of a peace; but the Scots were too much elated with their good fortune to make concessions, and the English were not yet sufficiently humbled to yield to all their demands. The ravages of war were again renewed: the Scots continued their incursions into England, and levied contributions in different places.

169
Consternation of the English.

In 1315, the English affairs seemed a little to revive.

166
Edward escapes to Dunbar, and thence to England.

Scotland
170
Expedition
of Edward
Bruce into
Ireland,

The Scots, indeed, plundered Durham and Hartlepool; but they were repulsed from Carlisle, and failed in an attempt on Berwick. The Irish of Ulster, oppressed by the English government, implored the assistance of Robert, and offered to acknowledge his brother Edward as their sovereign; who accordingly landed at Carrickfergus on the 25th of May 1315, with 6000 men.— This was an enterprize evidently beyond the power of Scotland to accomplish, and which could not but be perceived by Robert. However, there were motives which induced him to consent. The offer of a crown, though ever so visionary, inflamed the ambition of Edward Bruce, whose impetuous valour made no account of difficulties, however great. It might have been deemed ungenerous, and perhaps would not have been politic or safe, to have rejected the proposals of the Irish for the advancement of his brother, to whom the king owed more than he could repay. Besides, the invasion of Ireland seemed a proper expedient for dividing the English forces. The event proved unfortunate. Edward, after performing and suffering more than could almost have been expected from human nature, was at last defeated and killed by the English, as is related under the article IRELAND, n^o 42.

171
He is de-
feated and
killed,

172
Unsuccess-
ful attempts
of the Eng-
lish on Scot-
land,

The king himself had gone over into Ireland, in order to assist his brother in attempting the subjection of that country; and during his absence the English had made several attempts to disturb the tranquillity of Scotland. The earl of Arundel invaded the forest of Jedburgh with a numerous army; but being drawn into an ambuscade by Douglas, he was defeated with great loss. Edmund de Cailaud, a knight of Gascony and governor of Berwick, invaded and wasted Teviotdale; but while he was returning home loaded with spoil, he was attacked, defeated, and killed by Douglas. Soon after this, intelligence was conveyed to Douglas that one Robert Neville had boasted that he would encounter him whenever he saw his banner displayed. Douglas did not long delay to give him an opportunity. He advanced to the neighbourhood of Berwick, displayed his banner, and burnt some villages. Neville, provoked at these ravages, took the field, encountered Douglas, and was defeated and killed. By sea the English invaded Scotland, and anchored off Inverkeithing in the frith of Forth, where they soon after landed. Five hundred men, under the command of the earl of Fife and the sheriff of that country, attempted to oppose their landing, but were intimidated by the number of their enemies. William Sinclair bishop of Dunkeld happened to meet the fugitives; and having by his reproaches obliged them to rally, he led them on again to the charge, and drove the English to their ships with considerable loss. For this exploit Robert conferred the title of *the king's bishop* on Sinclair; and he was long remembered by his countrymen on this account.

173
Negotia-
tions with
the Pope,

In 1317, after king Robert had returned from his Irish expedition, a bull was issued by the pope (John XXII.) commanding a two years truce between England and Scotland, under pain of excommunication. Two cardinals were dispatched into Britain to make known his commands; and they were privately empowered to inflict the highest spiritual censures on Robert Bruce, or whomsoever else they thought proper. About the beginning of September 1317, two messengers were sent to Robert by the cardinals. The king gave them

a gracious reception; and after consulting with his barons, returned for answer, that he very much desired a good and perpetual peace, either by the mediation of the cardinals, or by any other means. He allowed the open letters from the pope, which recommended peace, to be read in his presence, and listened to them with due respect. But he would not receive the sealed letters addressed to *Robert Bruce governor of Scotland*, alleging, that there might be many of his barons whose names were *Robert Bruce*, and that these barons might probably have some share in the government. Unless, therefore, the letters were addressed to him as *king of Scotland*, he could not receive them without advice of his parliament, which he promised immediately to assemble on the occasion. The messengers attempted to apologise for the omission of the title of KING. "The holy church was not wont," they said, "during the dependence of a controversy, to write or say any thing which might be interpreted as prejudicial to the claims of either of the contending parties." "Since then," answered the king, "my spiritual father and my holy mother would not *prejudice* the cause of my adversary by bestowing on me the appellation of *king* during the dependence of the controversy, they ought not to have *prejudiced* my cause by withdrawing that appellation from me. I am in possession of the kingdom of Scotland; all my people call me king; and foreign princes address me under that title; but it seems that my parents are partial to their English son. Had you presumed to present letters with such an address to any other sovereign prince, you might perhaps have been answered in a harsher style; but I reverence you as the messengers of the holy see."

174
Spirited be-
haviour of
Robert,

The messengers, quite abashed with this reply, changed the discourse, and requested the king that he would consent to a temporary cessation of hostilities; but to this he declared, that he never would consent, while the English daily invaded and plundered his people. His counsellors, however, informed the messengers, that if the letters had been addressed to the *king of Scots*, the negotiations would instantly have been opened. This disrespectful omission they imputed to the intrigues of the English at the court of Rome, hinting at the same time that they had received this intelligence from Avignon.

When the messengers had informed the cardinals of these proceedings, the latter determined to proclaim the papal truce in Scotland; in which hazardous office they employed Adam Newton, guardian of the monastery of Minorites at Berwick, who was charged with letters to the clergy of Scotland, particularly to the bishop of St Andrew's. The monk found the king encamped with his army in a wood near Old Cambus, making preparations for assaulting Berwick. Personal access was denied to the king; but the monk, in obedience to his masters, proclaimed the truce by the authority of the pope. The king sent him for answer, that he would listen to no bulls, till he was treated as king of Scotland, and had made himself master of Berwick.

175
A papal
truce pro-
claimed in
Scotland,

The poor monk, terrified at this answer, requested either a safe conduct to Berwick, or permission to pass into Scotland, and deliver his letters to the Scottish clergy. Both were refused; and he was commanded to leave the country without loss of time. He set out for Berwick; but in his way thither was attacked by robbers;

176
Which is
disregarded
by the king,

Scotland. robbers, or some who pretended to be so. By them he was stripped and robbed of all his parchments, together with his letters and instructions; the robbers also, it is said, tore the pope's bull, without any regard to its sanctity.

177
Berwick
besieged
and taken
by the
Scots,

In 1318, king Robert proceeded in his enterprize against Berwick, but resolved to employ artifice as well as force in the reduction of it. A citizen of Berwick, by name *Spalding*, having been ill used by the governor, resolved to revenge himself; and therefore wrote a letter to a certain Scottish lord, whose relation he had married, offering on a certain night to betray the post where he kept guard. The nobleman communicated this important intelligence to the king. "You did well," said Robert, "in making me your confident; for if you had told this either to Randolph or Douglas, you would have offended the one whom you did not trust: Both of them, however, shall aid you in the execution of the enterprize." The king then commanded him to repair to a certain place with a body of troops; to which place he also gave separate orders to Douglas and Randolph to repair at the same hour, each with a body of troops under his command. The forces thus cautiously assembled marched to Berwick, and, assisted by *Spalding*, scaled the walls, making themselves masters of the town in a few hours. The garrison of the castle, perceiving that the number of Scots was but small, made a desperate sally with the men who had fled into the castle from the town; but, after an obstinate conflict, they were defeated and driven back, chiefly by the extraordinary valour of a young knight named *Sir William Keith of Galfon*.—This happened on the 28th of March 1318.

178
Who in-
vade Eng-
land with
great suc-
cess.

King Robert no sooner heard of the success of his forces against the town, than he hastened to lay siege to the castle of Berwick. This was soon obliged to capitulate; after which the Scots entered Northumberland, and took the castles of Wark, Harbottle, and Mitford. In May, they again invaded England, and penetrated into Yorkshire. In their progress they burnt the towns of Northallerton, Boroughbridge, Scarborough, and Skipton in Craven, forcing the inhabitants of Ripon to redeem themselves by paying 1000 merks: after which they returned to Scotland with much booty; and, as an English historian expresses it, "driving their prisoners before them like flocks of sheep."

179
King Ro-
bert ex-
communicated by
the Pope.

This year the interposition of the pope was obtained against Robert, with a view to intimidate the Scottish nation; and the two cardinals residing in England were commanded to excommunicate *Robert Bruce and his adherents*, on account of his treatment of the messengers of the holy see, and his assault of Berwick, after a truce had been proclaimed by the papal authority.—This sentence was accordingly put in execution, though Robert had certainly been excommunicated *once*, if not oftener, before. Messengers were sent from Scotland to Rome, in order to procure a reversal of the sentence; but Edward dispatched the bishop of Hereford, and Hugh d'Esperceur the Elder, to counteract this negotiation, informing his holiness at the same time of certain intercepted letters which had been written from Avignon to Scotland; upon which the pope ordered all the Scots residing at Avignon, and all of that place who had corresponded with Scotland, to be taken into custody.

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The most remarkable transaction of this year, however, was the defeat and death of Edward Bruce in Ireland; of which an account is given under the article IRELAND, n° 42. His body was quartered, and distributed for a public spectacle over Ireland; and his head was presented to Edward by John lord Bermingham the commander of the English army; in return for which service, he was rewarded with the title of *earl of Louth*.

In the mean time Edward, who had summoned a parliament to meet at Lincoln, was obliged to prorogue it on account of the Scottish invasion, and to assemble an army at York for the defence of his country. At Michaelmas it was determined, in a parliament held at London, that every city and town in England should furnish a certain proportion of men completely armed. Thus a considerable body of troops was soon raised; but, when they assembled at York, their party-animosities and mutual distrust rose to such an height, that it was found necessary to send them back to their habitations.

In 1319, Edward, having succeeded so well in his negotiations with the court of Rome, resolved to make similar attempts with other powers to the prejudice of the Scottish nation. Accordingly he requested the count of Flanders to prohibit the Scots from entering his country: but to this request he received the following remarkable reply: "Flanders is the common country of all men; I cannot prohibit any merchants from trafficking thither, for such prohibition would prove the ruin of my people." Finding himself baffled in this attempt, the English monarch once more determined to have recourse to war; and with this view commanded his army to assemble at Newcastle upon Tyne, on the 24th of July 1319: but before he proceeded, he requested the prayers of the clergy for the success of his expedition; and, to render their prayers the more effectual, he at the same time demanded from them a great sum of money by way of loan.

Every thing being now in readiness, the English army approached Berwick, which was commanded by Walter the Steward of Scotland. This nobleman had long apprehended an attack from the English, and had taken every means of defence in his power. The enemy, however, confiding in their numbers, made a general assault; but were repulsed on the 7th of September, after a long and obstinate contest. Their next attempt was on the side towards the river. At that time the walls of Berwick were of an inconsiderable height; and it was proposed to bring a vessel close to them, from whence the troops might enter by a drawbridge let down from the mast. But the Scots annoyed the assailants so much, that they could not bring this vessel within the proper distance; and at the ebb of the tide it grounded, and was burnt by the besieged.

—The English had then recourse to a new-invented engine which they called a *sow*, but for what reason is unknown. In many particulars it resembled the *testudo arietaria* of the ancients. It appears to have been a large fabric composed of timber, and well-roofed, having stages within it, and in height surpassing the wall of the town. It was moved upon wheels, and served for the double purpose of conducting the miners to the foot of the wall, and armed men to the storm. This machine was counteracted by one constructed by John

Scotland.

180
Edward
again in-
vades Scot-
land.

181
Berwick
besieged
by the Eng-
lish.

182
A new in-
vented en-
gine called
a *sow*.

Scotland. Crab, a Flemish engineer in the Scots service. This was a kind of moveable crane, whereby great stones might be raised on high, and then let fall upon the enemy. The English made a general assault on the quarter towards the sea, as well as on the land side; so that the garrison, exhausted by continual fatigue, could scarce maintain their posts. The great engine moved on to the walls; and, though stones were incessantly discharged against it from the crane, their effect was so small, that all hope of preserving Berwick was lost. At length a huge stone struck it with such force, that the beams gave way, and the Scots pouring down combustibles upon it, it was reduced to ashes. The English, however, still continued the attack. The Steward, with a reserve of 100 men, went from post to post, relieving those who were wounded or unfit for combat. One soldier of the reserve only remained with him when an alarm was given that the English had burnt a barrier at the port called *St Mary's*, possessed themselves of the draw-bridge, and fired the gate. The Steward hastened thither, called down the guard from the rampart, ordered the gate to be set open, and rushed out upon the enemy. A desperate combat ensued, and continued till the close of the day, when the English commanders withdrew their troops.

183
Destroyed
by the
Scots,

184
Who in-
vade Eng-
land.

185
The Eng-
lish defeat-
ed, and the
siege of Ber-
wick raised.

Notwithstanding this brave defence, it was evident that the town could not hold out long without a speedy relief; and Robert could not, with any probability of success, attack the fortified camp of the English. He therefore determined to make a powerful diversion in England, in order to oblige Edward to abandon the undertaking. By order of the king, 15,000 men entered England by the western marches. They had concerted a plan for carrying off the queen of England from her residence near York; but being disappointed in this attempt, they laid waste Yorkshire. The archbishop of York hastily collected a numerous body of commons and ecclesiastics, with whom he encountered the Scots at Mitton, near Borough-bridge, in the north-riding of Yorkshire. The English were instantly routed; 3000 were left dead on the field, and great part of those who fled perished in the river Swale. In this action 300 ecclesiastics lost their lives. The news of this successful inroad alarmed the besiegers of Berwick. The barons whose estates lay to the southward remote from the Scottish depredations were eager for continuing the siege. But they were opposed by those of the north; who were no less eager to abandon the enterprise, and return to the defence of their own country. With them the earl of Lancaster concurred in opinion; who, understanding that his favourite manor of Pontefract was exposed to the ravages of the Scots, departed with all his adherents. Edward, upon this, drew off the remainder of his army, and attempted to intercept Randolph and Douglas; but they eluded him, and returned in safety to Scotland.

The unsuccessful event of this last attempt induced Edward seriously to think of peace; and accordingly a truce between the two nations was concluded on the 21st of December 1319; which interval of tranquillity the Scots made use of in addressing a manifesto to the pope in justification of their cause. This was drawn up in a spirited manner, and made a very considerable alteration in the councils of Rome. The pope, foreseeing that Robert would not be terrified into submis-

sions, ordered Edward to make peace with him in the best manner he could. A negotiation was accordingly set on foot, which soon terminated ineffectually; the truce was not renewed, and in 1322 a mutual invasion took place. The Scots penetrated into Lancashire by the western marches; and, after plundering the country, returned home with an extraordinary booty; while Edward made great preparations for an expedition into Scotland, which took place in August the same year. In this, however, he was not attended with success. Robert had caused all the cattle to be driven off, and all the effects of any value to be removed from Lothian and the Merse; fixing his camp at Culross, on the north side of the frith of Forth. His orders for removing the cattle were so punctually obeyed, that, according to common tradition, the only prey which fell into the hands of the English was a lame bull at Tra-nent in East Lothian. Edward, however, still proceeded, and penetrated as far as Edinburgh, but without any hopes of subduing the kingdom. His provisions being consumed, many of his soldiers perished for want; and he was obliged at last to retire without having seen an enemy. On their return, his soldiers burnt the abbeys of Holyrood, Melross, Dryburgh, &c. killed many of the monks, and committed other sacrileges: but when they returned to their own country, and began again to enjoy a plentiful living, they indulged themselves in such excesses as were productive of mortal diseases; insomuch that, according to an English historian, almost one half of the great army which Edward had brought from England with him were destroyed either by hunger or gluttony.

186
England
again inva-
ded by the
Scots, and
Scotland by
the English.

187
Great part
of Edward's
army de-
stroyed.

No sooner were the English retired than they were pursued by the Scots, who laid siege to the castle of Norham. Edward lay at the abbey of Biland in Yorkshire, with a body of troops advantageously posted in the neighbourhood. The Scots, invited, as is said, by some traitors about the king's person, attempted to surprise him; and it was with the utmost difficulty that he made his escape to York, abandoning all his baggage and treasure to the enemy. The English camp was supposed to be accessible only by a narrow pass, but Douglas undertook to force it, and Randolph presented himself as a volunteer in this dangerous service under his friend Douglas. The Highlanders and men of the Isles climbed the precipice on which the English camp stood, and the enemy were driven out with great loss. The Scots pursued them to the very gates of York, wasted the country without controul, and returned home unmolested.

188
The Eng-
lish defeat-
ed and dri-
ven out of
their camp.

Edward, disheartened by repeated losses, agreed to a cessation of arms "with the men of Scotland who were engaged in war with him." But the king of Scotland would not consent to it in that form; however, he gave his consent, on the proper form being employed, to which Edward now made no objection. This treaty was concluded on the 30th of March 1323, and was to endure until the 12th of June 1336. It was agreed, that, during the continuance of it, no new fortresses should be erected in Cumberland, to the north of the Tyne, or in the counties of Berwick, Roxburgh, or Dumfries; and by a very singular article it was provided, that "Bruce and the people of Scotland might procure absolution from the pope; but in case there was no peace concluded before the expiration of the

189
A truce
concluded
between
England
and Scot-
land.

truce,

Scotland. truce, that the sentence of excommunication should revive." The treaty was ratified by Robert, under the style of the *king of Scotland*, 7th June 1323.

190 Birth of David Bruce.
191 Edward Baliol makes his appearance at the court of England.
The next care of Robert was to reconcile himself to the church, and to obtain from the pope the title of *king*, which had been so long denied him; which at last, though not without great difficulty, was obtained. This year a son was born to the king of Scotland at Dunfermline, and named *David*. The court-poets of the time foretold, that this infant would one day rival his father's fame, and prove victorious over the English. But scarce had this future hero come into the world, when a rival began to make his appearance. John Baliol, the unfortunate king of Scotland, had long been dead; but left a son named *Edward*, heir to his pretensions to the crown. The young prince had resided on his paternal estate in Normandy, neglected and forgotten; but in 1324 was called to the court of England, for the purpose, undoubtedly, of setting him up as a rival to young David Bruce, in case his father, now broken with fatigues, should die in a short time. The negotiations for peace, however, still went on; but the commissioners appointed for this purpose made little progress, by reason of demands for feudal sovereignty still made by the English. The reconciliation with the church was also broken off, by reason of the Scots keeping possession of Berwick. This had been taken during the papal truce; and Robert thought proper still to lie under the sentence of excommunication rather than to part with such an important fortress.

192 Douglas and Randolph invade England.
193 Edward III. marches against them.
In the beginning of the year 1327, Edward II. was deposed, and succeeded by his son Edward III. then in his 15th year. He renewed the negotiations for peace, and ratified the truce which his father had made; but hearing that the Scots had resolved to invade England if a peace was not immediately concluded, he summoned his barons to meet him in arms at Newcastle, and fortified York.—We are not certainly informed of the reasons which induced the Scots at this time to disregard the truce; however, it is certain, that on the 15th of June 1327, Douglas and Randolph invaded England by the western marches, with an army of 20,000 horsemen. Against them Edward III. led an army, consisting, at the lowest calculation, of 30,000 men, who assembled at Durham on the 13th of July. The Scots proceeded with the utmost cruelty, burning and destroying every thing as they went along; and on the 18th of the same month, the English discovered them by the smoke and flames which marked their progress. They marched forward in order of battle towards the quarter where the smoke was perceived; but, meeting with no enemy for two days, they concluded that the Scots had retired. Disencumbering themselves then of their heavy baggage, they resolved by a forced march to reach the river Tyne, and, by posting themselves on the north bank of that river, to intercept the Scots on their return. On the 20th of July, the cavalry having left the infantry behind, crossed the river at Haidon: but before the rest of the army could come up, the river was so swelled by sudden rains, that it could no longer be forded; and thus the troops remained divided for several days, without any accommodation for quarters, and in the greatest want of provisions and forage. The sol-

diers now began to murmur; and it was resolved again to proceed southwards. The king proclaimed a reward of lands, to the value of 100 l. yearly for life, to the person who should first discover the enemy "on dry ground, where they might be attacked;" and many knights and esquires swam across the river on this strange errand. The army continued its march for three days without any news of the Scots; but on the fourth day, certain accounts of them were brought by an esquire, Thomas Rokesby: who reported, that "the Scots had made him prisoner; but that their leaders, understanding his business, had set him at liberty; saying, that they had remained for eight days on the same ground, as ignorant of the motions of the English as the English were of theirs, and that they were desirous and ready to combat." With this man for their guide, the English soon came in view of the Scots. They were advantageously posted on a rising ground, having the river Were in front, and their flanks secured by rocks and precipices. The English dismounted and advanced, hoping to allure the Scots from their strong post; but in vain. Edward then sent a herald to Randolph and Douglas, with a message in the style of chivalry: "Either," says he, "suffer me to pass the river, and leave me room for ranging my forces; or do you pass the river, and I will leave you room to range yours; and thus shall we fight on equal terms." To this the Scottish commanders answered, "We will do neither. On our road hither we have burnt and spoiled the country; and here we are fixed while to us it seems good; and if the king of England is offended, let him come over and chastise us."

The armies continued in sight of each other for two days; after which the English, understanding that their enemies were distressed for provisions, resolved to maintain a close blockade, and to reduce them by famine. Next day, however, they were surprised to find that the Scots had secretly decamped, and taken post two miles up the river in ground still stronger, and of more difficult access, amidst a great wood. The English encamped opposite to them near Stanhope park. At midnight Douglas undertook a most desperate enterprise, some what resembling those of the ancient heroes. With 200 horsemen he approached the English camp, and entered it under the guise of a chief commander calling the rounds. Having thus eluded the centinels, he passed on to the royal quarters, overthrew every thing that opposed him, and furiously assaulted the king's tent. The domestics of Edward desperately defended their master; and his chaplain, with many others of his household, were slain. However, the king himself escaped; and Douglas, disappointed of his prey, rushed through the enemy, and effected a retreat with inconsiderable loss.—The following day, the English learned from a prisoner, that orders had been issued in the Scottish camp for all men to hold themselves in readiness that evening to follow the banner of Douglas: on which, apprehending an attack in the night, they prepared for battle, lighting great fires, and keeping a strict watch; but in the morning, they were informed by two trumpeters whom they had taken prisoners, that the Scots had decamped before midnight, and were returning to their own country. This report could scarcely be credited, and the army remained for some hours in order of battle; but at length some scouts having crossed the river,

Scotland.
194
is obliged to offer a reward for discovering where they are.

195
Desperate attempt of Douglas to carry off the king of England.

196
The Scots decamp, and return to their own country.

Scotland. river, returned with certain intelligence that the Scottish camp was totally deserted: which when the young king of England was certainly informed of, he burst into tears; for the enterprize, which thus terminated in disappointment and dishonour, had cost an immense sum. Every preparation had been made for opposing an enemy, and auxiliaries had even been procured at a most enormous expence from Hainault. These auxiliaries consisted of heavy-armed cavalry; and they were now so much worn out, that they could scarcely move. Their horses were all dead, or had become unserviceable, in a campaign of three weeks; so that they were obliged to procure horses to convey themselves to the south of England. Edward having rested at Durham for some days, marched to York, where he disbanded his army. Barbour, a Scots historian, relates, that there was a morass in the rear of the Scottish camp, which he calls the *two-mile morass*; that the Scots made a way over it with brushwood, removing it as they went along, that the English might not pursue them by the same way. The English historians are filled with descriptions of the strange appearance of the deserted camp of the Scots. They found there a number of skins stretched between stakes, which served for kettles to boil their meat; and for bread, each soldier carried along with him a bag of oatmeal, of which he made cakes, toasting them upon thin iron plates, which appear to have been part of their armour.

197
The treaty
of North-
ampton.

On the return of Douglas and Randolph, the king led his army against the eastern borders, and besieged the castle of Norham. However, in 1328, Edward, wearied out with continual losses and disappointments, consented to a perpetual peace between the two kingdoms on the following conditions. 1. The stone on which the kings of Scotland were wont to sit at the time of their coronation, shall be restored to the Scots. 2. The king of England engages to employ his good offices at the papal court for obtaining a revocation of all spiritual processes depending before the holy see against the king of Scots, or against his kingdom or subjects. 3. For these causes, and in order to make reparation for the ravages committed in England by the Scots, the king of Scots shall pay 30,000 merks to the king of England. 4. Restitution shall be made of the possessions belonging to ecclesiastics in either kingdom, whereof they may have been deprived during the war. 5. But there shall not be any restitution made of inheritances which have fallen into the hands of the king of England or of the king of Scots, by reason of the war between the two nations, or through the forfeiture of former possessors. 6. Johanna, sister of the king of England, shall be given in marriage to David, the son and heir to the king of Scots. 7. The king of Scots shall provide the princess Johanna in a jointure of 2000 l. yearly, secured on lands and rents, according to a reasonable estimation. 8. If either of the parties shall fail in performing these conditions, he shall pay 2000 pounds of silver to the papal treasury.

This peace, ratified at Northampton, is styled *ignominious* by the English historians, and the marriage of the Scots prince to the king of England's sister, denominated *that base marriage*; because at this time all pretensions to sovereignty over Scotland were given up, though they had in vain attempted to establish them

by a ruinous war of 20 years. The marriage of the infant prince was celebrated on the 12th of July 1328. Scotland.

On the 7th of June 1329 died Robert Bruce, unquestionably the greatest of all the Scottish monarchs. 198
His death seems to have been occasioned by the excessive fatigues of military service; and his disease, called by the historians of those times a leprosy, was probably an inveterate scurvy, occasioned by his way of living. He died at the age of 55. He was married to Isabella, daughter of Donald the tenth earl of Marr; by whom he had a daughter named Marjory, married to Walter the steward of Scotland; whose husband died in 1326. The second wife of Robert was Elisabeth, the daughter of Aymer de Burgh earl of Ulster. By her he had a son, David II.; a daughter named Margaret, married to William earl of Sutherland; another, named Matilda, married to an esquire named Thomas Isaac; and Elisabeth, married to Sir Walter Oliphant of Gask. He had also a natural son named Robert.

That king Robert I. was a man of unquestionable virtue and humanity, as well as unequalled in the knowledge of the military art, must be evident from many particulars already related. The only questionable part 199
of his character is his severe punishment of a conspiracy formed against him in the year 1320; a relation of which, to avoid interrupting our detail of more important matters, we have deferred till now.—The chief of the conspirators were William de Soulis, whose ancestor had been a candidate for the crown of Scotland; the countess of Strathern, and some other persons of high rank. The countess discovered the plot; after which Soulis confessed the whole, and was punished with perpetual imprisonment; as well as the countess, notwithstanding her having made the discovery. Gilbert de Malyerb and John de Logie, both knights, and Richard Brown an esquire, were put to death as traitors: but the person most lamented was Sir David de Brechin, for his bravery styled *the flower of chivalry*. He was nephew to the king, and served with great reputation against the Saracens. To him the conspirators, after having exacted an oath of secrecy, revealed their designs. He condemned their undertaking, and refused to share in it; but did not discover it, on account of the oath he had taken. Yet for this concealment he was tried as a traitor, condemned and executed, without regard to his personal merit or his relation to the king. The conspirators were tried before the parliament at Scone in 1320; and this session, in which so much blood was shed, was long remembered by the vulgar under the name of the *black parliament*. Whether there was any thing real in this conspiracy, or whether the king only made use of this pretence to rid himself of such as were obnoxious to him, cannot now be known with certainty.

After the death of Robert, the administration was assumed by Randolph, in consequence of an act passed in 1318, by which he was appointed regent in case of the king's death. In his new character he behaved himself in a most exemplary manner; and by impartially discharging the duties of his station, and rigidly administering justice, he secured the public tranquillity in the most perfect manner. A severe exercise of justice was now rendered not only necessary, but indispensable. 200
During

Scotland.

201
His excel-
lent admi-
nistration.

During a long course of war, the common people had been accustomed to plunder and bloodshed; and having now no English enemies to employ them, they robbed and murdered one another. The methods by which Randolph repressed these crimes were much the same with those which have been adopted in latter times; for he made the counties liable for the several robberies committed within their bounds. He even ordered the farmers and labourers not to house the tools employed by them in agriculture during the night-time, that the sheriff's officers might be the more vigilant in securing them. He gave orders for severely punishing all vagabonds, and obliged them to work for their livelihood; making proclamation, that no man should be admitted into a town or borough who could not earn his bread by his labour. These regulations were attended with the most salutary effects. A fellow who had secreted his own plough-irons, pretending that they were stolen, being detected by the sheriff's officers, was instantly hanged. A certain man having killed a priest, went to Rome, and obtained absolution from the pope; after which he boldly returned to Scotland. Randolph ordered him to be tried, and, on his conviction, to be executed: "Because," said he, "although the pope may grant absolution from the spiritual consequences of sin, he cannot screen offenders from civil punishment."

202
Douglas
sets out for
the Holy
Land with
King Ro-
bert's heart.

King Robert, just before his death, had desired that his heart might be deposited in our Saviour's sepulchre at Jerusalem; and on this errand the great commander Douglas was employed, who set sail in June 1330 with a numerous and splendid retinue. He anchored off Sluys in Flanders, the great emporium of the low countries, where he expected to find companions in his pilgrimage; but learning that Alphonso XI. the young king of Leon and Castile, was engaged in a war with Osmyn the Moor, he could not resist the temptation of fighting against the enemies of Christianity. He met with an honourable reception at the court of Spain, and readily obtained leave to enter into what was thought the common cause of Christianity. The Spaniards first came in sight of their enemy near Theba, a castle on the frontiers of Andalusia, towards the kingdom of Granada. The Moors were defeated; but Douglas giving way to his impetuous valour, pursued

the enemy too eagerly, and throwing among them the casket which contained the heart of his sovereign, cried out, "Now pass thou onward as thou wert wont; Douglas will follow thee or die." The fugitives rallied and surrounded Douglas; who, with a few of his followers, was killed in attempting to rescue Sir Walter St Clair of Roslin. His body was brought back to Scotland, and interred in the church of Douglas. His countrymen perpetuated his memory by bestowing upon him the epithet of *the good Sir James Douglas*. He was one of the greatest commanders of the age; and is said to have been engaged in 70 battles, 57 of which he gained, and was defeated in 13.—Of him it is reported, that meeting with an officer at the court of Alphonso, who had his face quite disfigured with scars, the latter said to him, "It astonishes me, that you, who are said to have seen so much service, should have no marks of wounds on your face." "Thank heaven," answered Douglas, "I had always an arm to protect my face."

Scotland.
203
Is killed by
the Moors
in Spain.

In 1331, Edward Baliol began to renew his pretensions to the crown of Scotland, about the same time that David II. and his consort Johanna were crowned at Scone; which ceremony was performed on the 24th of November. Some historians relate, that he was excited to this attempt by one Twynham Lowryson, a person who had been excommunicated for refusing to do penance for adultery, and afterwards was obliged to fly on account of his having way-laid the official, beat him, and extorted a sum of money from him. But however this may be, it is certain, that in this year differences began to arise with England, on the following account. It had been provided by an article of the treaty of Northampton, that "Thomas lord Wake of Ledel, Henry de Beaumont, called *earl of Buchan*, and Henry de Percy, should be restored to their estates, of which the king of Scots, by reason of the war between the two nations, had taken possession." This article had been executed with respect to Percy, but not to the other two; and though Edward had repeatedly complained of this neglect, he could not obtain any satisfaction (c).

204
Edward
Baliol
claims the
crown of
Scotland.

The disinherited barons now resolved to invade Scotland, though their force consisted of no more than 3000 infantry.

(c) As this is an important period of history, we shall here transcribe the opinion of lord Hailes concerning the causes of this strange delay of executing an article seemingly of little importance where a nation was concerned. "By the treaty of Northampton," says he, "all the claims of the English barons to inheritances in Scotland were disregarded, excepting those of Henry de Percy, Thomas lord Wake of Ledel, and Henry de Beaumont. Percy procured satisfaction: but the others did not."

"Henry de Beaumont, in the reign of Edward II. had associated himself with the nobility against the D'Espencers, and on that account had suffered imprisonment and exile. He aided queen Isabella in the invasion which proved the cause of the deposition, captivity, and death of her husband. Although, under the administration of Mortimer, he had obtained a share in the partition of the spoils of the D'Espencers, he persisted in opposing the measures of the new favourite; and although his own interests were secured by the treaty of Northampton, he boldly exclaimed against the injustice done to the other barons by that treaty. He joined the princes of the blood-royal in their attempt to rescue the young king from the hands of Isabella and her minion, and place him in their own; and, on the failure of that ill-advised conspiracy, he again took refuge in foreign parts. It appears that lord Wake, having followed the political opinions of Henry de Beaumont, was involved in like calamities and disgrace. While the queen-dowager and Mortimer retained their influence, the claims of those two barons were altogether overlooked: But within forty-eight hours after the execution of Mortimer, a peremptory demand was made by Edward III. to have their inheritance restored."

"The demand was unexpected and alarming. Made at the very moment of the fall of Isabella and Mortimer, and

Scotland. infantry, and 400 men at arms. Edward would not permit them to enter Scotland by the usual way, as he himself did not yet choose openly to take part in their quarrel. For this reason they were obliged to take shipping, and landed at a place called *Ravenbare*, *Ravenspur*, or *Ravenburgh*, at the mouth of the Humber (H). Randolph, having intelligence of the English preparations, had marched an army to the frontiers of East Lothian; but, being afterwards informed of the naval armament, he marched northwards; but died at Musselburgh, six miles east of Edinburgh, on the 20th of July 1332. With him died the glory of Scotland. The earl of Marr, a man whose only merit consisted in his being related to the royal family, was chosen to succeed him in the regency.—Edward, in the mean time, fell upon a most curious expedient to show the justice of his cause. In March 1332, he had published a prohibition for any person to infringe the treaty of Northampton. The disinherited lords had been suffered to embark, expressly for the purpose of invading Scotland, after this prohibition was published. *After they were gone*, Henry de Percy was empowered to punish those who should presume to array themselves in contempt of his prohibition; and because he understood that the Scots were arming in order to repel those invaders whom Edward had indirectly sent against them, he empowered Henry de Percy to arm against them.

205
Randolph
the regent
dies.

206
Baliol lands
at King-
horn, and
defeats the
Scots.

On the 31st of July, Edward Baliol and his associates landed in the neighbourhood of Kinghorn, on the Forth; routed the earl of Fife, who opposed them; and marched next day to Dunfermline. Having then ordered his fleet to wait for him at the mouth of the Tay, he proceeded northwards, and encamped on the Miller's acre at Forteviot, with the river Earn in front. Nothing, however, could be more dangerous than his situation at present, and his destruction would have been inevitable. The earl of Marr was encamped with a nu-

merous army on the opposite bank of the river Earn, in the neighbourhood of Duplin; and another, nearly as numerous, had advanced from the south, through the Lothians and Stirlingshire, and fixed its quarters at Auchterarder, eight miles to the west of Forteviot. Historians differ as to the number of the two armies. Fordun says, that the regent had with him 30,000 men, and the earl of March as many; and that Baliol had between 500 and 600 men at arms, that is, horsemen completely armed. Hemingford reckons each of the Scots armies at 40,000, and Baliol's at 500 armed men. Knyghton says, that Baliol, when he landed in Fife, had 300 armed men, and 3000 more of different sorts; but that he had in all only 2500 men in his camp at Earn. In this desperate situation, the English general formed a design of attacking the Scots in their camp. They were directed to a ford by Andrew Murray of Tullibardine. The Scots kept no watch, but abandoned themselves to intemperance and riotous mirth; while their enemies, led by Alexander Moubray, crossed the river at midnight. They ascended a rising ground, came unperceived on the right flank of the Scottish army, and made a dreadful slaughter. At the first attack, young Randolph halted with 300 men at arms to oppose the enemy; and being seconded by Murdoch earl of Menteith, Alexander Fraser, and Robert Bruce natural son to the late king, he gave a check to the English, and maintained the combat on equal terms. But now the regent himself, along with the whole multitude, rushed forward to battle without the least order: so that while the hindmost pressed on, the foremost were thrown down, trodden upon, and suffocated. The slaughter lasted many hours, and the remains of this vast army were utterly dispersed. Many men of eminence were killed; among whom were Donald earl of Marr, author of the whole catastrophe; Thomas earl of Moray, Murdoch earl of Menteith, Robert earl of Carrick, Alex-

207
Is in the
utmost dan-
ger in the
neighbour-
hood of
Duplin.

and in behalf of men who had loudly protested against the treaty of Northampton, it indicated a total and perilous change in the system of the English.

"Randolph, of late years, had beheld extraordinary vicissitudes in England. The D'Espensers alternately persecuted and triumphant, and at length abased in the dust: The fugitive Mortimer elevated to supreme authority, victorious over the princes of the bloody-royal, and then dragged to a gibbet. Hence it was natural for Randolph to wish, and even to look, for some new revolution, which might prove more favourable to the Scottish interests. Meanwhile, with great reason and good policy, he delayed the restitution of the inheritances claimed under the treaty of Northampton, in behalf of the avowed opposers of that treaty.

"Besides, it was necessary for Randolph to be assured that the English, while they urged the performance of one article of that treaty, did, on their part, sincerely purpose to perform its more important articles, by continuing to acknowledge the succession in the house of Bruce, and the independency of the Scottish nation.

"Of this, however, there was much reason to doubt. For the English king had taken Baliol under his protection, and had granted him a passport to come into England, with permission to reside there during a whole year, (10th October 1330). These things had no friendly or pacific appearance.

"Be this as it will, the event too fatally justified the apprehensions of Randolph; for, while Edward III. was demanding restitution of the estates reserved by the treaty of Northampton, his subjects were arming in violation of that treaty.

"It is remarkable, that, on the 24th March 1331-2, Edward appears to have known of the hostile association of the disinherited barons. His words are, '*Quia ex relatu accepimus plurimorum, quod diversi homines de regno nostro, et alii (meaning Baliol and his attendants), pacem inter nos, et Robertum de Brus, nuper Regem Scottorum, initam et confirmatam infringere machinantes, diversas congregationes hominum ad arma indies faciunt, et, per marchias regni nostri, dictam terram Scotiæ, ad eam modo guerrino impugnandum, ingredi intendunt;*' *Foedera*, T. iv. p. 511. And yet, on the 22d April following, he demanded restitution of the inheritance of lord Wake, one of the barons in arms;" *Foedera*, T. iv. p. 518.

(H) This place does not now exist; having been overwhelmed by the sea many centuries ago.

Scotland. Alexander Frazer, and Robert Bruce. The slaughter of the infantry and of the men at arms was very great; the most probable accounts make it 2000 men at arms, and upwards of 13,000 common soldiers. The loss of the English was inconsiderable.

208
Farther
success of
Baliol.

The day after this victory, Baliol took possession of Perth; and, apprehending an attack from the earl of March, caused the ditch to be cleared, and the town to be fortified with pallisadoes. The first information which the earl received of this dreadful defeat was from a common soldier, who fled from the place mortally wounded. When this poor wretch came up, he had time to do no more than to show his wounds; after which he fell down, and expired. On his arrival at the field of battle, he found a dreadful confirmation of the intelligence given by the soldier; but instead of taking his measures with any prudence, he and his men hurried on headlong to Perth, actuated only by a blind impulse to revenge. At first they designed to assault the place; but their hearts failing them, they next determined to reduce it by famine. This, however, could not be done unless the Scots were masters at sea. One John Crab, a Flemish engineer (who had distinguished himself by destroying the famous engine called the *sow* at the siege of Berwick), had continued for many years to annoy the English on the eastern coasts. After the blockade of Perth was formed, he came with ten vessels to the mouth of the Tay, where the English fleet was, and took the ship belonging to Henry de Beaumont; but soon after all his ten vessels were burnt by the English in a general engagement. After this the blockade of Perth was raised, the earl of March disbanded his army, and Edward Baliol was crowned king of Scotland at Scone, on the 24th of September 1332.

209
He is
crowned
king of
Scotland.

The new monarch was no sooner put in possession of the kingdom, than he left Perth in the hands of the earl of Fife, while he himself repaired to the southern parts of the kingdom. But the party of king David was far from being extinguished. Baliol was scarce gone, when the town of Perth was surprised, and its fortifications razed, by James Frazer, Simon Frazer, and Robert Keith. The earl of Fife was made prisoner, with his family and vassals. Andrew Murray of Tullibardine, who had directed the English to a ford on the river Earn, was put to death as a traitor. Such of the Scots as still adhered to the interest of their infant prince, chose Sir Andrew Murray of Bothwell regent. He was a brave and active man, but had not as yet sufficient force to attempt any thing considerable.

210
His shame-
ful behav-
iour.

In the mean time, Baliol behaved in a most scandalous manner. At Roxburgh, he made a solemn surrender of the liberties of Scotland; acknowledged Edward for his liege-lord; and, as if this had not been sufficient, he became bound to put him in possession of the town, castle, and territory of Berwick, and of other lands on the marches, extending in all to the yearly value of 2000 l. "on account," as the instrument bears, "of the great honour and emoluments which we have procured through the *sufferance* of our lord the king, and by the powerful and acceptable aid which we have received from his good subjects." He also proffered to marry the princess Johanna, whom he considered as only betrothed to David Bruce, and to add 500 l. to

her jointure; and this under the penalty of 10,000 l. to be appropriated as a portion to the young lady, or otherwise disposed of for her behoof. He further engaged to provide for the maintenance of David Bruce as the king of England should advise; and, lastly, he became bound to serve Edward in all his wars, excepting in England, Wales, and Ireland, for the space of a year together, with 200 men at arms, and all at his own charges; and he bound his successors to perform the like service with 100 men at arms. But afterwards Edward having engaged to maintain him on the throne of Scotland, Baliol bound himself to serve him in all his wars whatever.

Though the greatest part of the nation submitted to this shameful treaty, it roused the indignation of those who wished well to the liberties of their country. John, the second son of Randolph, now earl of Moray by the death of his brother; Archibald, the youngest brother of the renowned Douglas; together with Simon Frazer, assembled a body of horsemen at Moffat in Annandale; and, suddenly traversing the country, assaulted Baliol unexpectedly at Annan. His brother Henry made a gallant resistance for some time; but was at last overpowered with numbers, and killed, together with several other persons of distinction. Baliol himself escaped almost naked, with scarce a single attendant, and fled to England. After his departure, the Scots began to make depredations on the English frontiers. Edward issued a proclamation, in which he solemnly averred, that the Scots, by their hostile depredations, had violated the peace of Northampton. Baliol, in the mean time, being joined by some English barons, returned to Scotland; took and burnt a castle where Robert de Colville commanded; and, establishing his quarters in the neighbourhood of Roxburgh, began to make preparations for besieging Berwick. Just after his arrival, Archibald Douglas, with 3000 men, invaded England by the western marches, plundered the country, and carried off much booty; in revenge for which, Sir Anthony de Lucy made an inroad into Scotland, defeated and took prisoner Sir William Douglas, celebrated in history by the appellation of *the knight of Liddesdale*, whom Edward caused to be put in irons. About the same time, Sir Andrew Murray the regent attacked Baliol, with a view to discomfit him before the reinforcements which he expected out of England could arrive. A sharp conflict ensued at Roxburgh, in which the regent, attempting to rescue a soldier, was taken prisoner: and thus Scotland was at once deprived of its two ablest commanders.

211
Baliol sur-
prised, and
driven out
of Scot-
land.

212
The Scots
regent de-
feated and
taken pri-
soner.

Archibald Douglas was now declared regent; and Edward prepared to invade Scotland, in order to take vengeance on its inhabitants, as he said, for the wrongs they had done, and to seek such redress as might seem good to himself. He ordered possession to be taken of the isle of Man in his own name; and soon after made it over to Sir William de Montague, who had some claim of inheritance in it. The chief design of Edward in this expedition, however, was to obtain possession of the town of Berwick, which had been already ceded to him by Baliol. This appeared to the Scots a place of no less importance than it did to Edward; and therefore they took all the precautions in their power to prevent the loss of it. The earl of March was appointed to command the castle, and Sir

213
Berwick
besieged by
the Eng-
lish.

William

Scotland. William Keith the town. The Scots made an obstinate defence; yet it was evident that they must soon have yielded if they had not been relieved. At length the regent, with a numerous army, appeared in the neighbourhood. He endeavoured to convey succours into the town, or to provoke the enemies to quit the advantage of the ground, and engage in battle. But all his efforts were in vain; the English obstructed every passage, and stood on the defensive.

214
The Scots
invade
Northum-
berland in
vain.

The regent then entered Northumberland, wasted the country, and even assaulted Bamborough-castle, where Philippa the young queen of England had her residence. He fondly imagined that Edward III. would have abandoned the siege of Berwick, after the example of his father, in circumstances not dissimilar. Edward nevertheless persevered in his enterprise.

During a general assault, the town was set on fire, and in a great measure consumed. The inhabitants having experienced the evils of a siege, and dreading the worse evils of a storm, implored the earl of March and Sir William Keith to seek terms of capitulation. A truce was obtained; and it was agreed, that the town and castle should be delivered up on terms fair and honourable, unless succours arrived before the hour of vespers on the 19th July.

It was specially provided, "that Berwick should be held as relieved, in case 200 men at arms, in a body, should force their passage into the town."

By the treaty, Sir William Keith was permitted to have an interview with the regent. He found him with his army in Northumberland; urged the necessity of his return; and showed him, that Berwick, if not instantly relieved, was lost for ever. Persuaded by his importunities, the regent resolved to combat the English, and either to save Berwick or lose the kingdom.

215
The Scots
resolve to
come to an
engage-
ment.

On the afternoon of the 19th of July, the regent prepared for battle. He divided his army into four bodies. The first was led by John earl of Moray, the son of Randolph; but as he was young and inexperienced in war, James and Simon Frazer, soldiers of approved reputation, were joined with him in the command. The second body was led by the steward of Scotland, a youth of 16, under the inspection of his uncle Sir James Stewart of Rosyth. The third body was led by the regent himself, having with him the earl of Carrick and other barons of eminence. The fourth body, or reserve, appears to have been led by Hugh earl of Ross.

The numbers of the Scottish army on that day are variously reported by historians. The continuator of Hemingford, an author of that age, and Knyghton, who lived in the succeeding age, ascertain their numbers with more precision than is generally required in historical facts.

The continuator of Hemingford minutely records the numbers and arrangement of the Scottish army. He says, that, besides earls and other lords or great barons, there were 55 knights, 1100 men at arms, and

13,500 of the commons lightly armed, amounting in all to 14,655.

With him Knyghton appears to concur, when his narrative is cleared from the errors of ignorant or careless transcribers.

It is probable, however, that the servants who tended the horses of persons of distinction and of the men at arms, and the useless followers of the camp, were more numerous than the actual combatants.

The English were advantageously posted on a rising ground at Halydon, with a marshy hollow in their front. Of their particular disposition we are not informed, further than that Baliol had the command of one of the wings.

It had been provided by the treaty of capitulation, "That Berwick should be considered as relieved, in case 200 men at arms forced their passage into the town." This the Scottish men at arms attempted; but Edward, aware of their purpose, opposed them in person, and repulsed them with great slaughter. The Scottish army rushed on to a general attack; but they had to descend into the marshy hollow before mounting the eminences of Halydon. After having struggled with the difficulties of the ground, and after having been incessantly galled by the English archers, they reached the enemy. Although fatigued and disordered in their ranks, they fought as it became men who had conquered under the banners of Robert Bruce. The English, with equal valour, had great advantages of situation, and were better disciplined than their antagonists. The earl of Ross led the reserve to attack in flank that wing where Baliol commanded; but he was repulsed and slain. There fell with him Kenneth earl of Sutherland, and Murdoch earl of Menteith.

216
Battle of
Halydon.

In the other parts of the field, the events were equally disastrous. The regent received a mortal wound, and the Scots everywhere gave way. In the field, and during a pursuit for many miles, the number of slain and prisoners was so great, that few of the Scottish army escaped.

217
The Scots
defeated,
and the
regent
killed.

Besides the earls of Ross, Sutherland, and Menteith, there were among the slain Malcolm earl of Lennox, an aged baron; he had been one of the foremost to repair to the standard of Robert Bruce, and his last exertions were for his country: Alexander Bruce earl of Carrick, who atoned for the short defection from the family of his benefactor; John Campbell earl of Athole, nephew of the late king; James Frazer, and Simon Frazer; John de Graham, Alexander de Lindeyay, Alan Stewart, and many other persons of eminent rank.

The Steward had two uncles, John and James. John was killed, and James mortally wounded and made prisoner (1).

The regent, mortally wounded, and abandoned on the field of battle, only lived to see his army discomfited and himself a prisoner.

This victory was obtained with very inconsiderable loss.

(1) *Fordun*, l. xiii. c. 28. relates, that Sir James Stewart was slain; the English historians, that he was mortally wounded and made prisoner. It may be remarked, that at Halydon two Stewarts fought under the banner of their chiefs; the one Alan of Dreghorn, the paternal ancestor of Charles I. and the other James of Rosyth, the paternal ancestor of Oliver Cromwell.

Scotland. ²¹⁸ It is related by the English historians, that, on the side of their countrymen, there were killed one knight, one esquire, and 12 foot-soldiers. Nor will this appear altogether incredible, when we remember, that the English ranks remained unbroken, and that their archers, at a secure distance, incessantly annoyed the Scottish infantry.

²¹⁸ **Berwick** surrenders, and almost all Scotland submits. According to capitulation, the town and castle of Berwick surrendered. The English king took twelve hostages, for securing the fidelity of the citizens of Berwick.

Thus was the whole of Scotland reduced under the subjection of Baliol, excepting a few fortresses; so that it became necessary to provide for the safety of the young king and queen. Accordingly, they were conveyed to France, where they were honourably entertained. Meanwhile, Baliol employed himself in making new concessions to his liege-lord Edward; and in 1334 the work of submission was completed by a solemn instrument drawn up by Baliol, in which he surrendered great part of the Scottish dominions, to be forever annexed to the crown of England. In this instrument Baliol said, that "he had formerly become bound to make a grant to Edward of lands on the marches, to the amount of *two thousand-pound lands*; that the Scottish parliament had ratified his obligation; and that he had accordingly surrendered Berwick and its territory; and now, for completely discharging his obligation, he made an absolute surrender to the English crown of the forests of Jedburgh, Selkirk, and Ettrick; of the counties of Roxburgh, Peebles, and Dumfries; together with the county of Edinburgh, and the constabularies of Linlithgow and Haddington." This extraordinary surrender was made with so much precipitation, that Baliol forgot to except his own private estate out of it. This, however, was generously restored to him by Edward; who proclaimed, that, "having already received satisfaction in full, he had too much reverence for God, justice, and good faith to man, to allow the cession to be prejudicial to the private rights of the king of Scots." At the same time, Baliol presented himself before his liege-lord; did homage, and swore fealty, "for the whole kingdom of Scotland and the isles adjacent."

²²⁰ **A quarrel** among the English disinherited lords. A quarrel now arose among the disinherited lords, to whom this revolution had been owing, which produced the worst consequences to the interest of Baliol. The brother of Alexander de Moubray died, leaving daughters, but no issue-male. Moubray having claimed a preference to the daughters of his brother, Baliol countenanced his suit, and, as it appears, put him in possession of the inheritance. Henry de Beaumont earl of Buchan, and David de Strathbolgie or Hastings, earl of Athol, espoused the cause of the heirs-general; but perceiving that their solicitations were not heard, they left the court in disgust, and retired to their castles about the end of August 1334. Baliol soon perceived his error in offending these two powerful lords; and in order to regain their favour, dismissed Moubray, and conferred on David de Strathbolgie the whole estates of the young Steward of Scotland. Thus he alienated the affections of Moubray, and added to the power of the earl of Athol, who was by far too powerful before.

About this time Sir Andrew Murray of Bothwell,
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having regained his freedom, began to assemble the friends of liberty, and was immediately joined by Moubray. In a moment every thing was in confusion. ²²¹ Geoffrey de Moubray, governor of Roxburgh, revolted; Henry de Beaumont was besieged in his castle of Dundarg by Murray and Moubray, and forced to surrender, but obtained liberty to depart into England. Richard Talbot, endeavouring to pass into England with a body of troops, was defeated and taken prisoner by Sir William Keith of Galfon. The Steward of Scotland, who had lain concealed in the isle of Bute ever since the battle of Halidon, now passed over to the castle of Dunbarton, which was one of the few forts remaining to king David. With the assistance of Dougal Campbell of Lochow, he made himself master of the castle of Dunoon in Cowal. His tenants of the isle of Bute attacked and slew Alan de Lile the governor, and presented his head to their master. John the son of Gilbert, governor of the castle of Bute, was made prisoner in the action. He ordered the garrison to surrender, and attached himself to the Scottish interest. Encouraged by these successes, the Steward entered his ancient inheritance of Renfrew, and compelled the inhabitants to acknowledge the sovereignty of David. Godfrey de Ros, the governor of Ayrshire, submitted to the Steward. The earl of Moray returned from France, whither he had fled after the battle of Halidon, and was acknowledged regent along with the Steward. The earl, having raised a body of troops, marched against the earl of Athol, compelled him to retire into Lochaber, and at last to surrender; after which he embraced the party of the conquerors. ²²² Baliol was now obliged to retire again into England, in order to solicit assistance from Edward; and this was readily granted. Edward himself took the field at a very unfavourable season for military enterprises. His army was divided into two parts. With the one Edward wasted Lothian, while Baliol did the like in Anandale with the other; and, in the mean time, Patrick earl of March, notwithstanding the unfavourable posture of affairs, renounced the allegiance he had sworn to England. His motive for this was, that though the kings of England had maintained him in an independency dangerous to Scotland, he was assured that they would never permit him to become formidable in a country which they themselves possessed.

The year 1335 is remarkable for the siege of Lochleven castle by the English, under John de Strivelin. ²²³ This fort was built on a small island, and very difficult of access. The English commander erected a fort in the cemetery of Kinross; and at the lower end of the lake, from whence runs the stream called the *Water of Leven*, he raised a strong and lofty bulwark, by means of which he hoped to lay the island under water, and oblige the garrison to surrender. But four of the Scots soldiers, having found means to approach the bulwark undiscovered, pierced it so dexterously, that the waters, rushing out with a prodigious force, overflowed part of the English camp; and the garrison, sallying out during the confusion occasioned by this unexpected inundation, stormed and plundered the fort at Kinross. At this time the English commander, with many of his soldiers, happened to be absent at Dunfermline, celebrating the festival of St Margaret. On his return, he swore that he would never desist till

Scotland.

he had taken the place, and put the garrison to the sword; however, his utmost efforts were at last baffled, and he was obliged, notwithstanding his oath, to desist.

In the mean time, the regents assembled a parliament at Dairly, near Cupar in Fife; but no plan of defence could be fallen upon, by reason of the animosities and factions which prevailed among the barons. Through the mediation of the French, some terms of peace were proposed; but being rejected by the English, Edward again invaded Scotland, cruelly ravaging the country with one army, while Baliol and the earl of Warrene did the same with another. Soon after this invasion, count Guy of Namur landed at Berwick with a considerable number of men-at-arms in the service of the English. He advanced to the neighbourhood of Edinburgh; but was defeated and taken prisoner by the earls of March and Moray, and Sir Alexander Ramsay. In this engagement, one Richard Shaw, a Scottish esquire, was singled out by a combatant in the army of count Guy, and both pierced each other with their spears; the stranger being stripped, was discovered to be a woman. The earl of Moray treated Guy with the greatest respect, not only allowing him and the remainder of his troops to depart from Scotland without molestation, but even attending him to the borders, accompanied by William Douglas and his brother James. On his return, William de Prefsen, warden of the castle and forest of Jedburgh, attacked and defeated his party; James Douglas was killed, the earl himself taken prisoner, and carried into England.

Thus was the Scottish nation once more reduced to the brink of ruin. Alexander de Mowbray, Geoffrey de Mowbray, and some others, pretending powers from "the earl of Athol and Robert the Steward of Scotland," concluded a treaty with Edward at Perth; the substance of which was, that all the Scots should receive pardon, and have their fees, lands, and offices restored, excepting those who by *common assent* in parliament should be excluded. The liberties of the church and the ancient laws and usages of Scotland were to remain in full force. All offices were to be filled with Scotsmen, excepting that the king should appoint whom he pleased within his regalities.

The earl of Athol now began to persecute with the utmost fury those who wished well to the cause of Scotland. With 3000 men he besieged the castle of Kildrommey, which had hitherto been the great refuge of king David's party. Sir Andrew Murray of Bothwell resolved at all events to attempt the rescue of his wife and family, who were shut up in this castle. With 1100 men he surprised Athol in the forest of Kilblain. The earl's men, seized with a panic, fled and dispersed themselves; on which their commander, refusing to accept of quarter, was killed. Sir Andrew Murray then assembled a parliament at Dunfermline, where he was immediately appointed regent.

In 1336, the king of England perceiving that the Scots were taken under the patronage of France, resolved to invade their country, and crush them at once before they could have any assistance from their new allies. In this expedition he penetrated as far as Inverness; but the Scots, commanded by Sir Andrew Murray, avoided coming to a general action; so that Edward could not effect any thing of consequence.

The inhabitants of Aberdeen attacked one Thomas Rosheme, who had landed at Dunottar. They were defeated; but Rosheme fell in the action. Edward chastised the vanquished severely for their temerity, and laid the town in ashes. He then began to repair the castles whose fortifications had been demolished by king Robert. He put in a state of defence the castles of Dunottar, Kinclevin, Lawriston, Stirling, Bothwell, Edinburgh, and Roxburgh; greatly augmented the fortifications of Perth, and left a considerable body of troops in the place. The Scots began to reduce these castles as soon as Edward was departed; and in 1337, under Sir Andrew Murray, invaded Cumberland. No great exploits, however, were now performed on either side. Edward being employed in preparations for invading France, had little leisure to attend to the affairs of Scotland; and the Scots, divided among themselves, and destitute of those leaders under whom they had acquired so much glory, could not now annoy their enemies as formerly. The most remarkable transaction was the siege of the castle of Dunbar, belonging to the earl of March. The English commander was the earl of Salisbury. The earl of March was absent; but his wife, the daughter of Randolph, from her complexion commonly called *Black Agnes*, undertook to defend it in her husband's absence. The English again employed that huge machine called a *sow*, formerly mentioned in our account of the siege of Berwick: it met with the same fate now as at that time; an huge stone, let fall upon it from the top of the walls, crushed it to pieces. The English, baffled in every attack, turned the siege into a blockade; but Sir Alexander Ramsay having found means to enter it with 40 resolute men, the garrison made a sally, and cut in pieces the advanced guard of the enemy. The English, disheartened by so many misfortunes, abandoned the enterprise.

In 1338, Sir Andrew Murray the regent died, and was succeeded in his office by Robert the Steward of Scotland. In 1339 he reduced the town of Perth and the castle of Stirling; and gained over to the Scottish interest William Bullock, governor of the castle of Coupar: after which, having expelled the enemy from every post to the northward of the Forth, he employed himself in settling the affairs of the nation as well as he could.

In 1341, the castle of Edinburgh was surprised by a device of Sir William Bullock. According to his appointment, one Walter Currie of Dundee privately received into his ship the knight of Liddesdale, with William Fraser, Joachim of Kinbuck, and 200 resolute men. Currie cast anchor in Leith road, pretending to be an English shipmaster, who had a cargo of wine and provisions, with which he proposed to furnish the commander of the castle. His barrels and hampers were brought to the castle-gate, and suddenly thrown down in such a manner as to obstruct the shutting of it. Currie and his men then slew the centinels; and the knight of Liddesdale, with a party who lurked in the neighbourhood, rushed in, overpowered the garrison, and made themselves masters of the place.—On the 4th of March this year, the king and queen arrived from France, and landed at Inverbervie in Kincardineshire.

In 1342, Sir Alexander Ramsay took the strong fortresses of Roxburgh; for which important service the king bestowed on him the charge of sheriff of Teviotdale, at that

224
Count Guy
of Namur
defeated
and taken
prisoner.

225
The Scots
regent
taken pri-
soner, in
conse-
quence of
which a
shameful
treaty is
concluded
with Eng-
land.

226
The earl of
Athol de-
feated and
killed.

227
Edward
again in-
vades Scot-
land.

228
Dunbar
castle un-
successfully
besieged by
the Eng-
lish.

229
Exploits of
Robert the
Steward.

230
Edinburgh
castle sur-
prised by
Sir William
Bullock.

231
King David
arrives in
Scotland.

Scotland. that time held by William Douglas knight of Liddesdale. The king's liberality proved fatal to Ramsay: for from that time Douglas became his implacable and inveterate enemy; and having, after a pretended reconciliation, unexpectedly surprised him with three of his friends, he put them instantly to death, carrying off Ramsay himself to his castle of the Hermitage, where he caused him to be starved to death in a most barbarous manner. The unhappy man was confined in a room, over which was an heap of wheat; a few grains of which were let fall every day through a hole, not as many as would support life, but as would protract it for a time, and make him longer sensible of the agonies of hunger; and in this miserable situation he survived 17 days. About the same time Sir William Bullock was put to death by Douglas in a similar manner; nor was King David at that time in a capacity to punish such atrocious cruelties committed by so powerful a subject.

233 David invades England, and behaves with the utmost cruelty. In the mean time, David having raised a powerful army, prepared to take a severe revenge of the English, from whom he had suffered so much. Edward was at that time in France, but commanded Baliol to raise all the militia beyond the Trent: which order, however, produced but little effect; so much was this mean-spirited prince despised by the English. David invaded Northumberland without opposition, and ravaged the country; but was obliged to raise the siege of Newcastle, which was commanded by Sir John Nevil, an excellent officer. David, exasperated at this repulse, entered the bishopric of Durham, which he ravaged in the most cruel manner. However, on the approach of Edward with a powerful army, the Scots thought proper to retire; and a two years truce was agreed upon.

234 Other invasions. This pacification was but short-lived. In 1345 the Scots again prepared to invade England, while Edward took all necessary measures for opposing them: however, this year the Scots were successful, ravaging Westmoreland, and burning several towns. The year ended with a new truce between the two nations; and hostilities were not renewed till 1346, when David entered England with an army of 50,000 men. His first exploit was the taking of the fortress of Liddel, and massacring all whom he found in it. The commander, Sir Walter Selby, capitulated with a Scots knight for his life; but the bargain being disapproved of by David, he ordered two of Selby's sons to be strangled in his presence, and then the father's head to be cut off. From thence the Scots marched to Lancroft, which they plundered; then passing into Northumberland, they pillaged the priory of Hexham, but spared the town, that it might serve as a magazine. Three other towns, Corbridge, Durham, and Darlington, were spared for the same reason. In his march to Durham, it is said that he would have made the county a desert, had not some of the monks paid him a contribution of a thousand pounds to spare their estates: however, according to Knyghton, every Englishman who fell into David's hands was put to death, unless he could redeem his life by paying threepence.

235 Monstrous cruelty of David. To put a stop to the cruelties of this barbarous invader, the queen of England, in her husband's absence, assembled a powerful army, which was divided into four bodies; the first commanded by Lord Henry Percy; the second by the archbishop of York; the

third by the bishop of Lincoln, the lord Moubray, and Sir Thomas Rokeby; and the fourth and principal division was headed by Edward Baliol.—The king of Scotland headed a chosen battalion, composed of the flower of his nobility, and the auxiliaries with which he had been supplied by France. The high steward of Scotland headed the second line; and the third was commanded by the earls of Moray and Douglas. While the English were approaching, Lord Douglas and Sir David Graham skirmished with them, but were defeated with the loss of 500 of their men; which seemed an omen of the disaster that was about to ensue. The general engagement began between the archers on both sides; but the English being much superior in the use of the bow, the steward of Scotland advanced to the relief of his countrymen. The English archers, unable to bear his attack, fell back upon Lord Henry Percy's division, which was thus put in confusion, and would have been totally defeated, had not Baliol advanced to their relief with a body of 4000 horse. The steward was then obliged to retire; by which means the flank of that division commanded by David, and which was then engaged with another line of the English, was left exposed to an attack. Baliol perceived the advantage; and, without pursuing the steward, attacked the king's division, which was immediately cut in pieces or dispersed. David was left with about 80 noblemen and gentlemen, but still maintained the fight with obstinacy; nor would he yield even when wounded in the head with an arrow, expecting every moment to be relieved by the steward and that line of his army which was still entire under the Lords Moray and Douglas. At last finding himself totally overpowered, he attempted to retreat, but was overtaken by a party under one John Copeland. This captain, endeavouring to seize the king, had two of his teeth struck out by a blow of his gauntlet; but at last, finding it in vain to resist, the king was obliged to give up his sword and surrender himself a prisoner.—After he was taken, Baliol attacked and totally routed that division of the Scottish army which had hitherto remained entire under the Lords Moray and Douglas. In this battle the Scots lost a great number of their nobility, and 15,000 common soldiers. Many persons of the first distinction were also taken along with the king; and had it not been that the escape of the Scots was favoured by the avarice of the English soldiers, who neglected the pursuit in order to plunder, scarce a single Scotsman would have returned.

King David, after this unfortunate battle, was carried to the castle of Bamborough, where he was kept with so much privacy, that for some time it was not known where he was, or that he had been taken prisoner. As soon as the truth was known, the queen of England demanded the royal prisoner from Copeland; but the latter positively refused to part with him even to the queen, unless she could produce an order to that purpose under Edward's hand and seal. This resolute behaviour was resented by the queen, and a complaint made to the king; in consequence of which Copeland was summoned to appear before Edward, after having resigned David to the custody of Lord Nevil. The English monarch, at that time in France, approved of all that he had done, rewarded him with 500 l. a year, and sent him back to England with the honour of knight.

Scotland.

236 The battle of Durham.

237 The Scots defeated, and their king taken prisoner.

238 Account of king David after the battle.

Scotland. knighthood. David was then escorted by Copeland, attended, it is said, by 20,000 men, from the castle of Ogle in Northumberland, till the Lord Nevil, by indenture, delivered him into the hands of Sir Thomas Rokeby sheriff of Yorkshire. In the same pompous manner he was conducted all the way to London, which he entered on a black courser. He was received in the capital with the greatest solemnity by the lord-mayor and other magistrates, the city-companies under arms lining all the streets through which he passed, the houses loaded with spectators, who expressed a generous concern for his captivity. Being arrived at the Tower, he was delivered, by indenture likewise, to the custody of the constable, the Lord John Darcy, on the 2d of January 1347.

239
Baliol makes another attempt on the crown of Scotland.

240
The Scots recover the greatest part of their country.

241
Scotland infested with a dreadful plague.

242
Terms proposed for release of the Scottish monarch.

Baliol now, encouraged by the misfortune of his rival, made an effort once more to establish himself on the throne of Scotland; and before the end of the year reduced the castles of Hermitage and Roxburgh, the forest of Ettric, the Merse, with the counties of Annandale, Teviotdale, and Tweeddale. The Scots continued faithful to the cause of their king, notwithstanding his misfortune, and chose the Steward for the guardian of the kingdom. He behaved with a prudence equal to the high station he filled: nevertheless the progress of Baliol was so rapid, that it is scarcely probable he could have maintained his ground, had not Edward again consented to a truce; which, however, seems to have been ill observed on the part of the Scots. In fact, though both Scots and English historians are silent as to particulars, we find, that about the end of the year 1348, all Scotland was recovered out of the hands of the English; excepting Berwick, Roxburgh, Hermitage, and Lanric, which was part of Baliol's hereditary estate, and defended by him with an army. The Scots historians inform us, that the English, in revenge for the damages done to their country by the breach of the peace, proclaimed a tournament and other military exercises at Berwick, to which they invited the Scots; but in their way thither the latter fell into an ambuscade, and were all cut in pieces.

The years 1349 and 1350 were remarkable only for a dreadful plague which invaded Scotland, after having ravaged the continent of Europe. According to Fordun, one-third of the people of Scotland perished at this time. The patient's flesh swelled exceedingly, and he died in two days illness; but the mortality chiefly affected the middling and lower ranks of people. The same dreadful calamity continued throughout the years 1351 and 1352; occasioning a cessation of arms not only in Scotland, but throughout all Europe.

All this time King David remained a prisoner in England; for though several treaties had been proposed, they had hitherto come to nothing, because the English monarch insisted upon being indemnified for the ravages the Scots had committed in his territories. At last it was agreed, that the king of Scotland should be immediately set at liberty, on paying 90,000 merks for his ransom, by equal proportions, within the space of nine years: That 10,000 merks, being the first proportion, should be paid at the feast of Candlemas next to come, the second at Candlemas 1357, and so on till complete payment should be made of the whole: That, during the said space of nine years, there should be a truce between the two kingdoms: That 20 Scots gentlemen,

of the best families in the kingdom, should remain in England as hostages and sureties for the said sum; and that, if any part thereof was not paid at the precise time appointed, then David should remain a prisoner in England till it was paid; or, if he was detained by any just cause, that the lord high steward, the Lord Douglas, John of the Isles, and others of the highest rank, should come and supply his place.

These terms were rejected by the Scots nobility; and, in 1355, war was recommenced with England, at the instigation of France, who sent 40,000 crowns to Scotland as a supply for defraying the expences.

With this sum the guardian, having raised an army, once more took the field; but not before the English had destroyed the Lothians and Dougalsdale. A battle was fought on Nisbit-moor: in which the English being drawn into an ambuscade, were totally defeated. The next attempt of the Scots was against the town of Berwick, which they designed to surprise by an escalade. They met, however, with such a vigorous resistance, that many persons of distinction were killed. However, the attack proved successful; but the acquisition was of no great importance, as the castle still held out. Edward, in the mean time, hearing of the loss of the town, hurried back from France to London. Here he staid but three days, and marched northward to raise the siege. He reached Durham on the 23d of December 1355, where he appointed all his military tenants to meet him on the 1st of January 1356. On the 14th of the same month he arrived before Berwick, which was instantly retaken; but the Scots were allowed to depart for their own country. The reduction of this place produced an extraordinary effect: for Baliol now perceiving that Edward meant not to establish him on the throne of Scotland, but to retain in his own possession as many places of that country as he could, came at last to the resolution of giving up to the king of England the whole of Scotland. This indeed was no more than a form, because at that time he was not possessed of the kingdom. However, the ceremony was performed at Roxburgh; and Baliol presented his crown and some earth and stones by way of investiture. Baliol in return was to have a revenue of 2000 pounds a year; and as Edward was at the head of an excellent army, he had little doubt of being able to force the Scots to submit.

The affairs of Scotland were now in a very critical situation; and it was necessary to gain time. For this reason Edward was amused with a negotiation; and to this he the more willingly listened, as he was at that time waiting for his fleet, from which he had great expectations. A little time, however, discovered the deceit. The Scots plainly told Edward, that they would die rather than submit to his demands; and he, in return, threatened a most dreadful revenge. His fleet in the mean time arrived in the Frith of Forth; the mariners destroyed and pillaged all that was within their reach, without sparing even the sacred edifices, carrying off the statues of the blessed virgin, loading the monks with chains, and committing every thing in those days called impiety and sacrilege. Edward had by this time marched as far as Haddington, but was obliged to receive provisions all the way from his fleet; for the Scots had desolated the country through which he passed. During his march his army was harassed, and his

243
Rejected by the nobility, and war recommenced.

244
Berwick taken by the Scots.

245
Retaken by Edward.

246
Baliol resigns the kingdom of Scotland to Edward.

247
Who makes a furious invasion.

Scotland. his foragers cut off, so that he was reduced to distress; and at last his fleet being totally destroyed by a storm, he was obliged to return to England without accomplishing any thing.

248
But is obliged to return without accomplishing any thing.

249
David obtains his liberty.

250
Is embarrassed by the payment of his ransom.

In the mean time the prince of Wales, who had been left by his father to carry on the war in France, defeated and took prisoner John king of France at the battle of Poitiers. In this battle were 3000 Scots, who had gone over as auxiliaries to the French monarch, and who suffered extremely. However, the success of Edward, instead of rendering him haughty, seemed to have a contrary effect; and, by the mediation of Pope Innocent, a truce for two years was concluded with France, in which the Scots were comprehended. During this interval, the ransom of the king of Scots was settled at 100,000 merks to be paid in ten years; for which 20 hostages were to be given as formerly. In consequence of this treaty, David at last obtained his liberty in 1358; and Edward laid aside all hopes of ever subduing Scotland. As for Baliol, he was now sunk in oblivion; and it is not known what became of him, or when he died.

David, though now restored to liberty, found himself greatly embarrassed with the payment of such a large sum as had been stipulated for his ransom; the kingdom of Scotland being then in a most miserable and exhausted situation. After sending his queen, and going into England himself, he could obtain no greater favour than a respite of a few months for the payment of the second moiety; so that he was at last constrained to ask assistance from France. This could scarcely be expected in the distressed situation of that kingdom; however, it

was at last agreed, that 50,000 marks should be paid to Scotland, in case the Scots would consent to renew the war the following year. Neither party, however, kept their word; and David, being still greatly distressed about the remainder of his ransom, at last entered into a very extraordinary negotiation with Edward, by which he consented that the king of England should be his successor to the throne of Scotland. But this negotiation was defeated through the invincible hatred which the Scots bore to an English governor. David then, being entirely unable to discharge the remainder of his ransom, was obliged to enter into a new treaty; by which the kingdom of Scotland became indebted to Edward the sum of 100,000 pounds Sterling, to be paid by equal proportions within the space of 25 years, during which there should be a truce between the two nations.

Scotland.
251
Enters into a new treaty with Edward.

From this time we meet with little more of any moment in the reign of King David. After the death of his Queen Johanna, the sister of Edward, he married a Scots woman, of mean birth, named Margaret Logie; but by neither of his wives had he any children. Queen Margaret he divorced, on what pretence is not known; however, she left the kingdom, and complained personally to the pope, who treated her as David's lawful wife, and enjoined her husband to receive her as such under the most severe penalties. What effect these threats had on the king is not known; but it is certain that Margaret never returned to Scotland; and, on the 22d of February 1371, David himself died, leaving the kingdom to his nephew Robert Stewart, the first of that family who sat on the throne of Scotland (κ).

252
He dies, and is succeeded by Robert Stewart.

Some

(κ) Concerning the origin of the Stewart family, we have the following account by the Scots historians. Fleance, the son of the celebrated Banquo, after his father's murder by Macbeth, fled into Wales, where he had a son named *Walter*, by a princess of that country. After the restoration of Malcolm Canmore, this Walter returned to Scotland, where he was promoted to the high stewardship, a dignity held by service, and which intitled the possessor to all the privileges of a baron. Walter was now distinguished, from this office, by the title of *Walter the Stewart*, which descended to his posterity; and *Steward*, afterwards *Stewart*, or *Stuart*, became their surname.

On this subject Lord Hailes has the following remarks. "Our historians have recorded the achievements of Walter the Stewart of Scotland in the reign of Malcolm III. He is said to have been the father of Alan, and the grandfather of that Walter who was indeed Stewart of Scotland in the reign of David I. and Malcolm IV. It may perhaps be ascribed to strange prejudices, or to a spirit of scepticism, when I declare, that hitherto I have seen no evidence that such a person as Walter Stewart of Scotland, in the reign of Malcolm III. did ever exist.

"We are gravely told, 'That Walter the son of Fleance, the son of Banquo, Thane of Lochaber, having killed a man at the court of Griffith, prince of Wales, sought refuge with Edward the Confessor; and having killed another man at Edward's court, sought refuge with Alan the Red, earl of Brittany: That, on the Norman invasion, he came to England with the earl of Brittany, and signalized himself at the battle of Hastings in 1066: That the earl of Brittany, by his first wife Emma, daughter of Siward earl of Northumberland, had an only child Christina; and that he bestowed her in marriage on the young hero.' This is the story which, after various improvements since the days of Boece, has had the good fortune to obtain credit.

"That Walter, before he had well attained to the age of manhood, should have slain two men in private quarrels, is a circumstance improbable, yet possible; and therefore I object not to it. But his alliance with the earl of Brittany cannot be so easily admitted.

"Alan, surnamed *le Roux*, a younger son of Eudo earl of Brittany, was one of the gallant adventurers who came over with William the Conqueror; he had neither territories nor court. The historians of Brittany positively assert that he had no children. Besides, it is hard to say by what accident Alan *le Roux* should have become acquainted with Emma the daughter of Siward earl of Northumberland! I suppose that our historians invented this alliance, in order to strengthen the connection between Walter the Stewart and Malcolm III.

"According

Scotland.

Some authors tell us, that at the accession of Robert II. his title was disputed by William earl of Douglas. If any such claim was preferred, an assembly of the States set it aside, and it was resolved that Robert should be crowned at Scone; and to take away for the future all disputes concerning the succession, a particular act was framed, by which the kingdom was secured to Robert and his heirs.

253
Treaty with
France.

The new king being thus established on the throne, endeavoured to renew the war with the English, in order to recover from them the town of Berwick, and some other places on the borders. In this, however, he failed; and as 56,000 pounds of David's ransom still remained unpaid, Robert bound himself to discharge it at the rate of 4000 marks every midsummer. He then proposed an alliance with France; but the terms demanded by that kingdom being, that Scotland should be obliged to make war with England whenever France should require it, Robert could not by any means be induced to consent to such a requisition, which would have obliged him to break through the most solemn treaties, whenever the king of France should think proper to break with England. A new treaty,

therefore, was entered into, by which it was provided, that neither Scotland nor France should be obliged to make war with England; and by another clause, that the dispensation or authority even of the pope himself should never free the kings or kingdoms of France and Scotland from the obligations they lay under to assist one another, as often as required, in opposition to the kingdom of England. In case of a competition for the crown of Scotland, the king of France and his heirs were to take care that no English influence was used; but that the matter being by the greatest and best part of the nation decided conformably to the laws and establishments of Scotland, he should with all his power defend and assist the person so established. Lastly, it was agreed that no Frenchman should ever henceforth serve for wages, or otherwise, against Scotland, nor any Scotsman against France.

This last article occasioned a recal of all the Scots from the English armies, which Edward looked upon to be a prelude to an invasion. He accordingly issued writs for assembling all the militia in the north of England. At this time an invincible hatred subsisted between the neighbouring people of both nations, which extended

254
War be-
twixt the
Scots and
English
borderers.

"According to one account, the genealogies of their families stand thus:
Siward earl of Northumberland *.

Emma = Alan earl of Brittany.

Another daughter = Duncan king of Scots.

Christina = Walter the Stewart.

Malcolm III.

"Thus Walter the Stewart and Malcolm III. were cousins-german.

"According to another account, the genealogy of their families stands thus:

Siward Earl of Northumberland.

His sister = wife of Duncan.

Emma = Alan Earl of Brittany.

Malcolm III.

Christina = Walter the Stewart.

"Thus the mother of Walter the Stewart and Malcolm III. were cousins-german.

"It is said, 'That Walter the Stewart had a son, Alan, also Stewart of Scotland.' The evidence of this is to be found in a charter granted by Earl Gospatrick, and in another charter granted by his son Waldeve Earl of March, at Dunbar. In them Alden, or Aldan Dapifer, is mentioned as a witness; that is, say our antiquaries, *Alan, the steward of Scotland.*

"This is the fundamental proposition on which the genealogy of the house of Stuart, as it is commonly understood, may be said to rest. It will be remarked, that this hypothesis takes it for granted, that *Alden* or *Aldan*, and *Alan*, are the same; upon what authority I know not. The Alden mentioned in the two charters seems to have been the steward of Earl Gospatrick, and of Earl Waldeve, not the steward of Scotland.

To the charter by Earl Gospatrick, there are eight witnesses: 'Andrew the arch-deacon; Adam his brother; Nigel the chaplain; Ketel the son of Dolphin; Ernald; *Alden the Stewart* (Dapifer); Adam the son of Alden; Adam the son of Gospatrick.' Is it possible for credulity itself to believe, that the *Alden* placed so low in such company, was the *high steward of Scotland*, a man at least as honourable as Gospatrick himself? I can have no doubt, that the witnesses to this charter were the dependents or household-servants of Earl Gospatrick; and that if we interpret *Nigellus Capellanus* to be *Nigel the earl's chaplain*, we must interpret *Aldenus Dapifer* to be *Alden the earl's steward.*

"To the charter granted by Earl Waldeve, there are nine witnesses. *Alden Dapifer* is the seventh in order. There are only three among them who seem to have been landed men: 'Elias de Hadeftandena (probably Hassenden),

* There was a certain prince of Denmark who brought forth a son to a bear. This son was called *Bern*, and, natural enough like, had ears like a bear. He was the father of Siward earl of Northumberland. *Brompton*, p. 915. ap. Twissden.

Scotland. extended not only through the lower ranks, but had pervaded the higher classes also. The inhabitants of the borders, indeed, paid very little regard to the orders of their respective sovereigns; so that daily hostilities were committed by them upon each other when there was peace between the sovereigns. The inhabitants of these countries had established with one another certain conventions, which have since been collected, and go by the name of the *Border-laws*. The families of Douglas and Percy, whose estates lay contiguous to one another, were at perpetual variance. It had been common for the borderers of both kingdoms, during a truce, to frequent each others fairs; and a servant of the earl of March had been killed in a fray at that of Roxburgh, which was still in the hands of the English. Justice for this murder was demanded from lord Percy; but he slighted the complaint. On this the earl of March, with his brother the earl of Moray, assembling their followers, entered the next fair that was held in Roxburgh, plundered and burnt the town, and killed all the English who fell into their hands. The English borderers were ordered to lay waste the lands of the earl of March; but, in their way thither, destroyed the

estate of Sir John Gordon, a man of great property in the south of Scotland. Sir John in his turn invaded England, from whence he drove off a large booty in cattle, and a number of prisoners. In his retreat he was attacked by a body of fresh troops under Sir John Lisburn, at a place called *Caram*. An obstinate encounter followed. The Scots were five times repulsed; but at last they renewed the charge with such fury, that they made Lisburn, his brother, and several other persons of distinction, prisoners, together with all their surviving soldiers. On this lord Percy with 7000 men encamped at Duns, in the south of Scotland; but was obliged to retire, probably for want of subsistence for his army. In the mean time, Musgrave, the governor of Berwick, who had been ordered to join Percy with a detachment from the garrison, was on his march intercepted, defeated, and taken prisoner by Sir John Gordon; after which the border war became general on both sides. The issue of these disturbances is but little known; however, in 1377, we find them raging with more violence than ever. The fair of Roxburgh was once more the scene of action, and the town was again burnt down by the Scots. Lord Percy, who was now

Scotland.

earl

Haffenden), William de Copland, and William de Hellebat (q. Elbottle); all the three are placed before *Alden Dapifer*.

"It has been remarked, 'That in those days the title of *stewart* or *dapifer* was too high a title to be given to the retainer of an earl.' I answer, that the Saxon Chronicle, anno 1093, says, 'Moracl of Boebbahurh was thaes eorles *steward*,' i. e. Morel of Bamborough was this earl's *stewart*, or the *stewart* of Robert Earl of Northumberland. Besides, to a charter granted by Earl Gospatrick the Elder, *Lambertus Dapifer* is a witness. If *Lambertus Dapifer*, in a charter of Gospatrick the Elder, implies *Lambert the stewart of the family of March*, why should *Aldenus Dapifer*, in the charters of the son and grandson of Gospatrick, imply the *stewart of Scotland*?

"I believe that no defender of the common hypothesis will answer this objection, by pretending that *Lambertus Dapifer* was indeed *stewart of Scotland*. Such an answer would leave no room for Walter *stewart* of Scotland, who is held to have been a distinguished personage in the reign of Malcolm III.

"It is curious to see upon what slight grounds our antiquaries have established the connection between *Aldenus Dapifer* and the house of Stewart. *Walterus filius Alani* appears to have flourished in the reign of David I. In the reign of Malcolm IV. he is termed *Dapifer*. Hence it has been rashly concluded, that *Walterus Dapifer filius Alani* was the son of that *Aldenus Dapifer* who is a witness to the charters of Gospatrick and Waldeve.

"I persuade myself, that *Alden Dapifer*, and *Alen the father of Walter Stewart* of Scotland, in the reign of Malcolm IV. were different persons; and that they had nothing in common but the Christian name, if indeed they had that in common.

"Some of my readers may demand, 'Who then was Alen the father of Walter, *stewart* of Scotland in the reign of Malcolm IV.?'

"I can only answer this question by demanding, 'Who was the father of Martach Earl of Marre in the reign of Malcolm III.; of Gilchrist Earl of Angus in the reign of Alexander I.; of Fergus Lord of Galloway in the reign of Malcolm IV.; or of Friskinus de Moravia, ancestor of the family of Sutherland, in the reign of William the Lion? Or, to keep in the supposed line of the royal family of Stewart, 'Who was the father of Banquo Thane of Lochaber?'

"Many answers may no doubt be made to this last question. Kennedy says, that the father of Banquo was one of the seven sons of Corc king of Munster; Sir George M'Kenzie, Of Ferquhard, the son of Kenneth III.; and Simpson, The son of Ferquhard Thane of Lochaber, the son of Kenneth, the son of Murdoch, the son of Doir, the son of Eth king of Scotland.

"It is remarkable, that Abercrombie relates all those contradictory stories, without ever suspecting the natural inference arising from them, 'That if noble persons are not satisfied with a long pedigree, proved by authentic instruments, they must believe in flattering and ignorant fictions; and that if they scorn to wait for the dawn of record to enlighten their descent, they must bewilder themselves in dark and fabulous genealogies.'

"In the reign of David I. before the middle of the 12th century, the family of the Stewarts was opulent and powerful. It may therefore have subsisted for many ages previous to that time; but when, and what was its commencement, we cannot determine."

Scotland.

255
Berwick
taken and
retaken.

earl of Northumberland, resolved to take signal vengeance. He ravaged the Scots borders, particularly the earl of March's estate, for three days, at the head of 10,000 men. Some time after this, the Scots insurgents became powerful enough to surprise Berwick; which, however, was quickly retaken by the English, who soon after invaded Scotland. In this expedition, however, they succeeded so ill, that Percy thought proper to desist from his expedition. The Scots in the mean time began hostilities by sea, under one Mercer, an experienced sailor; but he had the misfortune to be taken prisoner by the English, with all his fleet. In 1379, England was afflicted with a dreadful plague, of which the Scots took advantage to invade the country. The English historians tell us that they behaved with the utmost barbarity, killing and plundering the defenceless inhabitants without mercy.

This predatory war continued, generally to the disadvantage of the English, till the beginning of November 1380, when a truce was concluded, to continue for a year; which, however, related only to the borders. This truce, like the others, was but very indifferently observed; so that, in 1383, new negotiations were set on foot: but, in 1384, the war was renewed with greater fury than ever. In the spring, the earls of March and Douglas took the castle of Lochmaben, and intercepted a rich convoy which the English were sending to Roxburgh; burnt to the ground the castle of Wark, and committed such devastations in the north of England, that several gentlemen offered to resign their estates to King Richard, because they were not able to defend them against the Scots. The Duke of Lancaster entered Scotland at the head of an army; but the inhabitants had removed every thing valuable, so that he marched on to Edinburgh without accomplishing any thing of consequence. On his return, he was harassed by flying parties of Scots, who destroyed a considerable number of his men. This year also the French sent a body of auxiliaries into Scotland. The earls of Northumberland and Nottingham entered Scotland with an army of 10,000 horse and 6000 archers; but retired, after having committed some devastations in the southern counties. The Scots revenged themselves by laying waste all the northern part of England to the gates of Newcastle. Berwick was taken by the Scots, and soon after surrendered for the sum of 2000 marks. A truce was then, as usual, concluded; but in the mean time king Robert was meditating a most severe blow against the English.

256
Formidable
invasion of
England
projected.

The Duke of Burgundy having come to the possession of the estate of his father-in-law the earl of Flanders, claimed the sovereignty of the town of Ghent; but they refused to submit to him, and in this refusal were protected by king Richard II. of England. On this the duke of Burgundy proposed to the French court to invade England in concert with the Scots.— This being agreed to, a fleet was fitted out at Sluys; on board of which John de Vienne, the French admiral, embarked, carrying along with him 50,000 pounds in gold, which the duke of Burgundy advanced in order to be distributed in Scotland, where the admiral arrived safe with a considerable reinforcement, together with supplies of all kinds of military stores. Two thousand auxiliaries, of whom 500 were men-at-arms, arrived with this fleet; and 400 suits of complete ar-

mour were brought along with them, in order to be distributed among the bravest of the Scots.

The Scots were for a short time elated with the great attention which had been paid them by the French king; but, in the mean time, the Flemings having revolted, the French abandoned the Scots to sustain the whole weight of the English resentment, that they themselves might employ their arms in Flanders. King Richard took the field with a more numerous army than had ever been mustered in England before. Hostilities were begun by the Scots, who, according to custom, invaded the northern parts of England, and carried off a considerable booty: however, in their retreat, they were in the utmost danger of being cut off by the duke of Lancaster, who had been sent with an army to intercept them. The English army proceeded northwards; but could accomplish nothing, on account of the country being desolated, till they came to Edinburgh, which they laid in ashes. Being, however, incessantly harassed by parties of the enemy, they were obliged to retreat.

Nothing remarkable happened till the year 1378, when, after a short truce, the war was renewed with fresh fury. Northumberland and Westmoreland were ravaged by the earls of Fife and Douglas, and Lord Nithsdale defeated a body of 3000 English; after which he formed the plan of invading Ireland, the inhabitants of which had of late been very active against the Scots. In 1388, Douglas obtained permission to raise a body of forces for this invasion; and having landed in safety, defeated the Irish, plundered the town of Carlingford, and loaded fifteen ships with the booty. From thence the Scots sailed to the isle of Man, which in like manner was plundered and laid waste; after which they returned with their booty to Loch Rian in Scotland.

Encouraged by this success, Robert determined to proceed on a more enlarged plan. Having assembled a parliament at Aberdeen, a double invasion of England was resolved upon. Two armies were raised; the one, consisting of 25,000 men, commanded by the earls of Mentieth and Fife, Douglas lord of Galloway, and Alexander Lindsay; the other army, consisting of the like number, was commanded by the earls of Douglas, March, Crawford, Moray, the lord high Constable of Scotland, and other persons of distinction. The former entered Cumberland, and the latter Northumberland, both which countries they laid waste, and both armies were to meet within ten miles of Newcastle. The English were thrown into the greatest consternation. Newcastle was defended by the earl of Northumberland, whose age and infirmities rendered him incapable of taking the field; but his place was abundantly supplied by his two sons Henry and Ralph, the former of whom is known in English history by the name of *Hotspur*. The town was garrisoned by the flower of the English nobility and gentry, as well as the inhabitants of the adjacent countries, who had fled thither for refuge. Douglas selected 2000 foot and 300 horsemen out of the two armies, and encamped on the north side of the town, with a view, according to the Scots historians, of storming it next day. In the mean time, he was challenged by Hotspur to fight him hand to hand, with sharp ground spears, in sight of both armies. Douglas accepted the challenge, and Percy was unhorsed the first encounter, and obliged to take refuge within the port.

257
But comes
to nothing.258
England
invaded by
two Scots
armies at
once.259
Single com-
bat be-
tween earls
Douglas
and Henry
Percy.

Scotland. portcullis or gate of the town; from whence Douglas brought off his antagonist's lance, with a pennon affixed to it, and swore in his hearing that he would carry it into Scotland. Next day Douglas attempted to storm the town; but, being repulsed in the attack, he decamped in the night. Percy, breathing furious revenge, pursued and overtook the Scots at Otterburn. His arrival was quite unexpected, so that the principal commanders of the Scottish army were sitting down to supper unarmed. The soldiers, however, were instantly prepared for battle; but in the hurry necessarily attending a surprise of this kind, Douglas forgot to put on his cuirass. Both leaders encouraged their men by the most animating speeches; and both parties waited for the rise of the moon, which happened that night to be unusually bright. The battle being joined on the moon's first appearance, the Scots began to give ground; but, being rallied by Douglas, who fought with a battle-ax, the English, though greatly superior in number, were totally routed. Twelve hundred were killed on the spot; and 100 persons of distinction, among whom were the two Percies, were made prisoners by Keith marischal of Scotland. On the side of the Scots the greatest loss was that of the brave earl Douglas, who was killed in consequence of going to battle without his armour, as above related. It was this single combat between Douglas and Percy, and the subsequent battle, which gave rise to the celebrated ballad of Chevy Chase.

260
Battle of
Otterburn.

261
The Eng-
lish defeat-
ed, and earl
Douglas
killed.

In the mean time the bishop of Durham was marching towards Newcastle with an army of 10,000 men; but was informed by the runaways of Percy's defeat, which happened on the 21st of July 1388. In a council of war it was resolved to pursue the Scots, whom they hoped easily to vanquish, as being wearied with the battle of the preceding day, and laden with plunder. The earl of Moray, who commanded in chief, having called a consultation of his officers, resolved to venture a battle. The prisoners were almost as numerous as the whole Scots army; however, the generals required no more of them than their words of honour that they should continue inactive during the battle, and remain prisoners still. This condition being complied with, the Scots drew out their army for battle.— Their rear was secured by marshes, and their flanks by large trees which they had felled. In short, their appearance was so formidable, that the English, dreading to encounter a resolute enemy so strongly secured, retired to Newcastle, leaving the Scots at liberty to continue their march to their own country.

Robert being now oppressed with age, so that he could no longer endure the fatigues of government, the administration of affairs devolved upon his second son the earl of Fife; for his eldest son was by nature indolent, and besides lame by an unlucky blow he had received from a horse. Early in the spring of 1389, he invaded England with success: but the same year a truce was concluded, to last from the 19th of June 1389 to the 16th of August 1392; in which the allies of both crowns were included. This truce was violently opposed by the nobility, who suspected their king of being too much under French influence. Upon this the court of France thought proper to send over ambassadors to persuade the nobility to comply; informing them, that in case of a refusal, they could expect no

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assistance either of men or money from the continent. With difficulty they prevailed, and peace between England and Scotland was once more restored. Scarce, however, was this truce finished, when the peace of the nation was most scandalously violated by Robert's third son the earl of Buchan. This prince having a quarrel with the bishop of Murray, burnt down the fine cathedral of Elgin, which has been called by historians the lanthorn and ornament of the north of Scotland. The king for this crime caused his son to be imprisoned; and a civil war would have been the consequence, had it not been for the veneration which the Scots retained for their old king. However, they did not long enjoy their beloved monarch; for he died on the 19th of April 1390, in the 75th year of his age, and the 19th of his reign.

On the death of Robert II. the crown devolved upon his eldest son John; but the name being thought unlucky in Scotland, he changed it for that of Robert, though he was still called by the commonalty *Robert John Fernzier*. He had been married to Annabella, the daughter of Sir John Drummond, ancestor to the noble family of Perth; and was crowned along with his consort at Scone, on the 13th of August 1390. He confirmed the truce which had been entered into with England, and renewed the league with France; but the beginning of his reign was disturbed by the wars of the petty chieftains with each other. Duncan Stewart, son to Alexander earl of Buchan, who had died in prison for burning the cathedral of Elgin, assembling his followers under pretence of revenging his father's death, laid waste the county of Angus. Walter Ogilvy, the sheriff of Angus, attempting to repel the invaders, was killed, with his brother and 60 of their followers. The king then gave a commission to the earl of Crawford to suppress them; which he soon did, and most of them were either killed or executed. The followers of the earl of Buchan were composed of the wildest Highlanders, distinguished by the title of *Catterenes*, which answers to that of banditti. That such a race of people existed is certain from the records of Scotland; but it is not easy to determine how they obtained their subsistence, being void of the knowledge of agriculture and of every civil art. There is some reason to believe that many of them came from the Western Isles; and that they or their ancestors had emigrated from the eastern parts of Ireland. The lands they inhabited were never cultivated till towards the middle of the last century; and, according to the most authentic accounts, they lived entirely upon animal food.

The earl of Crawford's success against the followers of Buchan encouraged Robert to intrust him with a commission for subduing other insurgents by whom the peace of the country was disturbed. The most remarkable of these were the *Clan Chattan* and *Clan Kay*. As both these tribes were numerous and brave, Crawford was not without apprehensions that they might unite against him as a common enemy, and defeat him if he attempted to suppress them by force. He proposed, therefore, that the two rival clans should each choose 30 men, to determine their differences by the sword, without being allowed the use of any other weapon. The king and his nobility were to be spectators of the combat; the conquered clan were to be pardoned for all their former offences, and the conquerors honoured

Scotland.

262
Robert II.
dies, and
is succeed-
ed by Ro-
bert III.

263
Rebellion
of the earl
of Buchan.

264
Account of
the Catter-
enes.

264
Battle be-
tween the
champions
of the clan
Chattan
and clan
Kay.

Scotland. with the royal favour. This proposal was readily accepted by both parties, and the north inch of Perth was to be the scene of action. But, upon mustering the combatants, it was found that one of them, belonging to the clan Chattan, had absented himself. It was proposed to balance this difference by withdrawing one of the combatants from the clan Kay; but not one of them could be prevailed on to resign his place. At last one Henry Wynd, a saddler, though no way connected with either party, offered to supply the place of him that was absent, on condition of his receiving a French crown of gold (about 7 s. 6 d. of our money); which was immediately paid him. The combat then began with incredible fury; but at last, through the superior valour and skill of Henry Wynd, victory declared in favour of the clan Chattan. Only ten of the conquerors, besides Wynd, were left alive; and all of them desperately wounded. Of the clan Kay only one remained; and he having received no hurt escaped by swimming across the Tay.

265
Title of
Duke in-
troduced
into Scot-
land.

While these internal broils were going on, the truce which had lately been concluded with England was so ill observed, that it became necessary to enter into fresh negotiations. These, like others which had taken place before, had very little effect. The borderers on both sides had been so accustomed to ravage and plunder, that they could not live in quiet. King Robert also was thought to be too much attached to the king of England. He had introduced the new title of *duke*, which he bestowed first on the prince royal; but making an offer of that honour to one of the heads of the Douglas family, it was rejected with disdain. That powerful family had never lost sight of an ancient claim they had upon the castle of Roxburgh, which was still in the possession of the English; and this year the son of the earl of Douglas, Sir William Stewart, and others, broke down the bridge of Roxburgh, plundered the town, and destroyed the forage and corn there and in the neighbouring country. The English applied for satisfaction; but obtained none, as the confusion which involved the kingdom by the deposition of Richard II. and the accession of Henry IV. prevented them from having recourse to arms, the only argument to which the Scots patriots in those days would listen.

No sooner was the catastrophe of Richard known in Scotland, than they resolved to avail themselves of it; and invading the north parts of England, demolished the castle of Wark, and laid the neighbouring country under contribution. The situation of Henry's affairs did not admit of his resenting this insult. He contented himself with nominating his brother the earl of Westmoreland, to treat with the Scots about a truce or peace; or, if that could not be obtained, to make a mutual agreement, that the towns of Dumfries in Scotland, and Penrith in England, should be free from hostilities during the war. To this proposal the Scots paid no regard; and being encouraged by the court of France, who resented the deposition of Richard, they renewed their ravages in England. In 1400, the king of England called a parliament, in order to consult on the most proper means of repelling the Scottish invasions; and in this he was greatly assisted by the divisions of the Scots among themselves. The duke of Rothesay, the heir-

apparent of the crown, was now grown up to man's estate, and it was thought proper to provide a suitable confort for him. The king is said to have scandalously put up his son's marriage at auction, and offered him to the lady whose father could give him the highest price. The earl of March was the highest bidder; and advanced a considerable sum in ready money, on condition that his daughter should become the royal bride.— This sordid match was opposed by Douglas, who proposed his own daughter the lady Margery. So degenerate was the court of Scotland at this time, that neither the king nor the duke of Rothesay opposed this proposal of a new match, because it was to be purchased with a fresh sum; and they even refused to indemnify the earl of March for the money he had already advanced.

As the duke of Albany sided with Douglas, a council of the nobility was privately assembled, which annulled the contract of the lady Elizabeth Dunbar, the earl of March's daughter, in favour of the lady Margery, daughter to the earl of Douglas; but without taking any measures for repaying the money to the earl of March. The continuator of Fordun informs us, that the earl of Douglas paid a larger sum for his daughter's fortune than that which had been advanced by the earl of March, and that the earl of Douglas's daughter was married to the duke of Rothesay: that, before the marriage was celebrated, March demanded that the money he had advanced should be reimbursed; but receiving an unsatisfactory answer, he declared, that as the king had not fulfilled his bargain, he would bring unexpected calamities upon the country. Accordingly he fled into England, leaving his castle of Dunbar to the custody of his nephew Robert Maitland, who soon after put it into the hands of the earl of Douglas, called in history *Archibald the Grim*, from the sternness of his visage.

As soon as Robert heard of the revolt of the earl of March, he sent ambassadors demanding back his subject; but the request was disregarded. On the other hand, the earl of March demanded repossession of the castle of Dunbar, pleading, that he had committed no act of treason, but had come to England under a safe conduct from king Henry, on purpose to negotiate his private affairs: but this request was disregarded; upon which he sent for all his family and followers to England, where they joined him in great numbers. This produced a war between the two kingdoms. The earl of March, with Henry Percy surname *Hotspur*, invaded Scotland, penetrating as far as Haddington, and carrying off great numbers of the inhabitants into captivity. From thence they went to Peebles, and then to Linton, ravaging the country all the way as they passed along. They next besieged the castle of Hales, and took several of the neighbouring forts; but Archibald the Grim, or rather his son, having raised an army against them, they were struck with terror, and fled to Berwick, to the gates of which they were pursued by the Scots. At this time the Scottish admiral, Sir Robert Logan, was at sea with a squadron; but miscarried in an attempt he made upon some English ships of war that protected their fleet when fishing upon the coast of Scotland. After this the English plundered the Orkney islands; which, though belong-

268
Invasion of
Scotland by
Henry
Percy.

ing

267
Earl of
March re-
volts.

266
Mercenary
behaviour
of Robert
with re-
gard to his
son's mar-
riage.

Scotland. ing to the crown of Norway, were at that time governed, or rather farmed, by Sinclair the Scots earl of Orkney and Caithness.

All this time the earl of March continued under the protection of the king of England. He had received repeated invitations to return to his allegiance: but all of them being rejected, he was proclaimed a traitor; and the Scottish governor made a formal demand of him from king Henry. With this the latter not only refused to comply, but renewed his league with the lord of the isles. He pretended also, that at this time he had intercepted some letters from the Scottish reGENCY, which called him "a traitor in the highest degree;" and he alleged this as a reason why he protected not only the earl of March but the lord of the Isles.

On the 25th of July 1400, the earl of March renounced his homage, fealty, and service, to the king of Scotland, and transferred them to Henry by a formal indenture. For this the earl was rewarded with a pension of 500 merks Sterling, and the manor of Clipstone in Sherwood forest. Henry now began to revive the claim of homage from the kings of Scotland, and even to meditate the conquest of the kingdom. He had indeed many reasons to hope for success; the principal of which were, the weakness of the Scottish government, the divided state of the royal family, and the dissensions among the chief nobility. For this purpose he made great preparations both by sea and land; but before he set out on his journey, he received a letter from the duke of Rothefay, full of reproaches on account of the presumptuous letters which Henry had addressed to Robert and his nobility. The letter was addressed by the duke to his adversary of England, as the Scots had not yet recognized the title of Henry to the crown of England. Towards the end of it the duke, according to the custom of the times, desired Henry, in order to avoid the effusion of Christian blood, to fight him in person with two, three, or an hundred noblemen on a side. But this challenge produced no other answer from Henry, than that "he was surprised that the duke of Rothefay should consider noble blood as not being *Christian*, since he desired the effusion of the one, and not of the other." Henry arrived at Leith on the very day in which he had appointed the Scottish nobility to meet him and pay their homage, and conclude a peace between the two crowns. In all probability, he expected to have been joined by great numbers of the discontented Scots; and he flattered the English with a promise of raising the power and glory of their country to a higher pitch than it had ever known. Under this pretext, he seized upon the sum of 350,000 pounds in ready money, besides as much in plate and jewels, which had been left by Richard in the royal treasury. He raised also vast contributions on the clergy and nobility, and likewise on the principal towns and cities. At last, finding that neither his vast preparations, nor the interest of the earl of March, had brought any of the Scots to his standard, he formed the siege of Edinburgh castle, which was defended by the duke of Rothefay, and, as some say, by the earl of Douglas. The duke of Albany, brother to king Robert, was then in the field with an army, and sent a letter to king Henry, promising, that if he would remain where he was for six days, he would give

him battle, and force him to raise the siege, or lose his life. When this was written, the duke was at Caldermuir; and Henry was so much pleased with the letter, that he presented the herald who delivered it with his upper garment, and a chain of gold; promising, on his royal word, that he would remain where he was until the appointed day. On this occasion, however, the duke forfeited his honour; for he suffered six days to elapse without making any attempt on the English army.

Henry, in the mean time, pushed on the siege of Edinburgh castle; but met with such a vigorous resistance from the duke of Rothefay, that the hopes of reducing it were but small. At the same time he was informed that the Welsh were on the point of rebellion under the famous chieftain named *Owen Glendower*. He knew also that many of the English were highly dissatisfied with his title to the crown; and that he owed his peaceable possession of it to the moderation of the earl of March, who was the real heir to the unfortunate Richard, but a nobleman of no ambition. For these reasons he concluded it best to raise the siege of Edinburgh castle, and to return to England. He then agreed to a truce for six weeks, but which was afterwards prolonged, probably for a year, by the commissioners of the two crowns, who met at Kelso.

In 1401, Scotland suffered a great loss by the death of Walter Trail, the archbishop of St Andrew's, a most exemplary patriot, and a person of great influence. Archibald Douglas the Grim had died some time before, and his loss was now severely felt; for the king himself, naturally feeble, and now quite disabled by his age and infirmities, was sequestered from the world in such a manner, that we know not even the place of his residence during the last invasion of Scotland by the English. This year also queen Anabella died, so that none remained who might be able to heal those divisions which prevailed among the royal family. Robert duke of Albany, a man of great ambition, was an enemy to the duke of Rothefay, the heir-apparent to the crown; and endeavoured, for obvious reasons, to impress his father with a bad opinion of him. This prince, however, appears to have been chargeable with no misdemeanour of any consequence, excepting his having debauched, under promise of marriage, the daughter of William Lindsay of Rossy. But this is not supported by any credible evidence; and, though it had been true, could never justify the horrid treatment he met with, and which we are now about to relate.

One Ramorgny, a man of the vilest principles, but an attendant on the duke of Rothefay, had won his confidence; and, perceiving how much he resented the conduct of his uncle the duke of Albany, had the villainy to suggest to the prince the dispatching him by assassination. The prince rejected this infamous proposal with such horror and displeasure, that the villain, being afraid he would disclose it to the duke of Albany, informed the latter, under the seal of the most inviolable secrecy, that the prince intended to murder him; upon which the duke, and William Lindsay of Rossy his associate in the treason, resolved upon the prince's death. By practising upon the doating king, Lindsay and Ramorgny obtained a writ directed to the duke of Albany, empowering him to arrest his son, and to keep him under restraint, in order for his amendment. The same

269
Henry IV.
projects the
conquest of
Scotland.

270
But fails
in his at-
tempt.

271
Conspiracy
against the
duke of
Rothefay.

Scotland.

traitors had previously possessed the prince with an apprehension that his life was in danger, and had persuaded him to seize the castle of St Andrew's, and to keep possession of it during the vacancy of that see. Robert had nominated one of his bastard brethren, who was then deacon of St Andrew's, to that bishopric: but being a person no way fitted for such a dignity, he declined the honour, and the chapter refused to elect any other during his lifetime; so that the prince had a prospect of possessing the castle for some time. He was riding thither with a small attendance, when he was arrested between the towns of Nidi and Strathum (according to the continuator of Fordun), and hurried to the very castle of which he was preparing to take possession.

272
Who is
starved to
death.

The duke of Albany, and the earl of Douglas, who was likewise the prince's enemy, were then at Culrofs, waiting the event of their detestable conspiracy; of which they were no sooner informed, than they ordered a strong body of ruffians to carry the royal captive from the castle of St Andrew's; which they did, after clothing him in a russet cloak, mounting him on a very sorry horse, and committing him to the custody of two execrable wretches, John Selkirk and John Wright, who were ordered by the duke of Albany to starve him to death. According to Buchanan, his fate was for some time prolonged by the compassion of one of his keeper's daughters, who thrust thin oat cakes through the chinks of his prison-walls, and by a woman who, being a wet nurse, found means to convey part of her milk to him through a small tube. Both these charitable females were detected, and put to death; the young lady's inhuman father being himself the prosecutor. The prince himself died a few days after, on Easter-eve, his hunger having impelled him to devour part of his own flesh.

273
A body of
Scots cut
off by the
English.

In the mean time, Robert, being yet ignorant of the murder of his son, had renewed, or rather consented to renew, hostilities with England. On the expiration of the truce, Henry had sent a commission to the earls of Northumberland and Westmoreland, to offer the Scots any terms they could reasonably desire; but every offer of this kind being rejected, there was a necessity for renewing hostilities. The earl of March had received another pension from Henry, on condition of his keeping on foot a certain number of light troops to act against the Scots. This had been done; and so effectually did these now annoy their enemies, that the earl of Douglas was obliged to take the field against them. By dividing his men into small parties, he repressed the depredations of these invaders; and Thomas Haliburton, the commander of one of the Scottish parties, made incursions into England as far as Bamborough, from whence he returned with a considerable booty. This encouraged another chieftain, Patrick Hepburn, to make a similar attempt: but being elated with his success, he remained too long in the enemy's country; so that the earl of March had time to send a detachment to intercept him on his return. This produced a desperate encounter, in which Hepburn was killed; the flower of the youth of Lothian, who had attended in this expedition, were cut off, and scarce a single Scotsman remained unwounded.

On the news of this disaster, the earl of Douglas applied to the duke of Albany for assistance. He was

immediately furnished with a considerable army, according to some, consisting of 10,000; according to others of 13,000; and according to the English historians, of 20,000 men. Murdoc, the son of the duke, attended the earl on this expedition, as did also the earls of Moray, Angus, Orkney, and many others of the chief nobility, with 80 knights. The Scots on this occasion conducted themselves with the same imprudence they had done before. Having penetrated too far into the country, they were intercepted by the English on their return, and obliged to engage at a place called *Homeldon*, under great disadvantages. The consequence was, that they were utterly defeated, and almost the whole army either killed or taken.

274
Their de-
feat at
Homeldon.

Henry Hotspur, to whom this victory was chiefly owing, resolving to pursue the advantage he had gained, entered the southern parts of the kingdom; and laid siege to a castle called *Cocklawys*, on the borders of Teviotdale. The castle was for some time bravely defended: but at last the governor entered into a treaty, by which it was agreed to deliver up the castle, in case it was not relieved by the king or governor in six weeks; during which time no additional fortifications were to be made. But while the English were retiring, one of Percy's soldiers pretended that the Scots had broke the capitulation, by introducing a mattock into the place. The governor, hearing of this charge, offered to fight any Englishman who should engage to make it good. A champion was accordingly singled out, but was defeated by the Scotsman; and the English army retired according to agreement. The matter then being debated in the Scottish council, it was resolved to send relief to the castle. Accordingly the duke of Albany, with a powerful army, set out for the place; but before he came there, certain news were received of the defeat and death of Hotspur, at Shrewsbury, as related under the article ENGLAND, n° 182.

275
Cocklawys
castle be-
sieged by
the English.

In the year 1404, king Henry, exceedingly desirous of a peace with Scotland, renewed his negotiations for that purpose. These, however, not being attended with success, hostilities were still continued, but without any remarkable transaction on either side. In the mean time, king Robert was informed of the miserable fate of his eldest son the duke of Rothesay; but was unable to resent it by executing justice on such a powerful murderer. After giving himself up to grief, therefore, for some time, he resolved to provide for the safety of his second son James, by sending him into France. This scheme was not communicated to the duke of Albany; and the young prince took shipping with all imaginable secrecy at the Bass, under the care of the earl of Orkney. On his voyage he was taken by an English privateer off Flamborough-head, and brought before Henry. The English monarch having examined the attendants of the prince, they told him that they were carrying the prince to France for his education. "I understand the French tongue (replied Henry), and your countrymen ought to have been kind enough to have trusted me with their prince's education." He then committed the prince and his attendants close prisoners to the tower of London. The news of this disaster arrived at the castle of Rothesay in the isle of Bute (the place of Robert's residence) while the king was at supper. The news threw him into such an agony of grief, that he died in three days,

276
The Scot-
tish prince,
James, sent
to France,
but is taken
by the Eng-
lish.

277
Robert dies
of grief.

Scotland. days, the 29th of March 1405, after having reigned near 15 years.

278
The duke
of Albany
regent.

By the death of Robert, and the captivity of the prince, all the power devolved upon the duke of Albany, who was appointed regent by a convention of the states assembled at Scone. The allegiance of the people, however, to their captive prince could not be shaken; so that the regent was obliged to raise an army for the purpose of rescuing him. Henry summoned all his military tenants, and made great preparations: but, having agreed to treat of a final peace with Ireland and the lord of the Isles, the regent laid hold of this as a pretence for entering into a new negociation with the English monarch; and a truce was concluded for a year, during which time all differences were to be settled. In consequence of this agreement, Rothefay, king at arms, was appointed commissary-general for the king and kingdom of Scotland; and in that quality repaired to the court of England. At the time when the prince of Scotland was taken, it seems that there had been a truce, however ill observed on both sides, subsisting between the two nations. Rothefay produced the record of this truce, which provided that the Scots should have a free navigation; and in consequence of this, he demanded justice of the captain and crew of the privateer who had taken the prince. Henry ordered the matter to be inquired into: but the English brought their complaints as well as the Scots; and the claims of both were so intricate, that the examination fell to the ground, but at the same time the truce was prolonged.

279
Schemes of
Henry
against
Scotland.

In the end of the year 1409, or the beginning of 1410, the war was renewed with England, and Henry prepared to strike a fatal blow which he had long meditated against Scotland. He had, as we have seen, entered into a league with the lord of the Isles, where a considerable revolution then happened. Walter Lesley had succeeded to the estate and honours of the earl of Ross, in right of his wife, who was the heir. By that marriage, he had a son named *Alexander*, who succeeded him; and a daughter, Margaret, who was married to the lord of the Isles. This Alexander had married one of the regent's daughters; and dying young, he left behind him an only daughter, Euphane, who was deformed, and become a nun at North Berwick. Her grandfather, the regent, procured from her a resignation of the earldom of Ross, to which she was undoubted heir, in favour of John earl of Buchan, but in prejudice of Donald lord of the Isles, who was the son of Margaret, sister to the earl Alexander, and consequently the nearest heir to the estate after the nun. Donald applied for redress; but his suit being rejected, he, with his brother John, fled into England, where he was most graciously received by king Henry. According to the instructions given him by the English monarch, Donald returned to his own dominions in the Isles, where he raised an army, and passing over into Ross-shire, violently seized on the estate in dispute. In a short time he found himself at the head of 10,000 Highlanders; with whom he marched into the province of Moray, and from thence to Strathbogie and Garioch, which he laid under contribution. Advancing towards Aberdeen, with a view to pay his troops with the plunder of that city, which was then a place of considerable trade, he was met by the earl of Marr, whom the re-

gent had employed to command against him, at a village called *Harlaw*, in the neighbourhood of Aberdeen. A fierce engagement ensued, in which great numbers were killed on both sides, and the victory remained uncertain: but Donald, finding himself in the midst of an enemy's country, where he could raise no recruits, began to retreat next day; and the shattered state of the royal army preventing him from being pursued, he escaped to his own dominions, where in a short time he submitted, and swore allegiance to the crown of Scotland.

Scotland.
280
Battle of
Harlaw.

In the mean time, Henry continued the war with Scotland, and refused to renew the truce, though frequently solicited by the Scots. He had now, however, sustained a great loss by the defection of the earl of March, who had gone over to the Scots, though the historians have not informed us of his quarrel with the English monarch. On his return to Scotland, he had been fully reconciled to the Douglas family, and now strove to distinguish himself in the cause of his country. This, with the countenance which was shown the Scots by the court of France, a bull published by the pope in their favour, and the vigorous behaviour of the regent himself, contributed to reduce Henry to reason; and we hear of no more hostilities between the two nations till after the death of the English monarch, which happened in the year 1413.

281
The earl of
March re-
turns to his
allegiance
to Scot-
land.

In 1415, the truce being either broken or expired, the Scots made great preparations for besieging Berwick. The undertaking, however, came to nothing; all that was done during the campaign being the burning of Penrith by the Scots, and of Dumfries by the English. Next year a truce was agreed upon, and a treaty entered into for the ransom of King James; which was so far advanced, that the English king agreed to his visiting Scotland, provided he engaged to forfeit 100,000 pounds Sterling in case of his failure to return by a certain day. For reasons now unknown, this treaty was broken off, and vast preparations were made for a new invasion of Scotland; which, however, was executed with so little success, that it became known among the common people of Scotland by the name of the *fole raid*, or the foolish expedition.

282
Unsuccess-
ful expedi-
tion of
Henry.

In 1420, died Robert duke of Albany, regent of Scotland, at the age of 80; and such was the veneration which the Scots had for his memory, that his post of regent was conferred upon his eldest son Murdoch, though a person no way qualified for that station. The war with England was now discontinued; but in France Henry met with the greatest opposition from the Scots auxiliaries, insomuch, that at last he proclaimed all the Scots in the service of the Dauphin to be rebels against their lawful sovereign, and threatened to treat them as such wherever he found them. It was not long before he had an opportunity of putting this menace in execution; for the town and castle of Melun being obliged through famine to capitulate, one of the articles of capitulation was, that all the English and Scots in the place should be resigned to the absolute disposal of the king of England; and, in consequence of his resolution above-mentioned, caused twenty Scots soldiers who were found in the place to be hanged as traitors. In 1421, Henry returned to England, and with him James the Scots king. On his

283
His cruelty
to the Scots
in France.

arrival

Scotland. arrival there, he was informed that the Scots, under the earl of Douglas, had made an irruption into England, where they had burned Newark, but had been forced to return to their own country by a pestilence, though a new invasion was daily expected. Instead of resenting this insult, Henry invited the earl of Douglas to a conference at York; in which the latter agreed to serve him during life, by sea and land, abroad or at home, against all living, except his own liege-lord the king of Scotland, with 200 foot and as many horse, at his own charges; the king of England, in the mean time, allowing an annual revenue of 200 l. for paying his expence in going to the army by sea or land.

284
Treaty for
the liberty
of James.

At the same time, a new negociation was set on foot for the ransom of king James; but he did not obtain his liberty till the year 1424. Henry V. was then dead; and none of his generals being able to supply his place, the English power in France began to decline. They then became sensible how necessary it was to be at peace with Scotland, in order to detach such a formidable ally from the French interest. James was now highly caressed, and at his own liberty, within certain bounds. The English even consulted him about the manner of conducting the treaty for his ransom; and one Dougal Drummond, a priest, was sent with a safe conduct for the bishop of Glasgow, chancellor of Scotland, Dunbar earl of March, John Montgomery of Ardrossan, Sir Patrick Dunbar of Bele, Sir Robert Lawder of Edrington, Sir William Borthwic of Borthwic, and Sir John Forrester of Corstorphin, to have an interview, at Pomfret, with their master the captive king of Scotland, and there to treat of their common interests. Most of these noblemen and gentlemen had before been nominated to treat with the English about their king's return; and Dougal Drummond seems to have been a domestic favourite with James. Hitherto the Scottish king had been allowed an annual revenue of 700 pounds: but while he was making ready for his journey, his equipages and attendants were increased to those befitting a sovereign; and he received a present from the English treasury of 100 l. for his private expences. That he might appear with a grandeur every way suitable to his dignity, at every stage were provided relays of horses, and all manner of fish, flesh, and fowl, with cooks and other servants for furnishing out the most sumptuous royal entertainment. In this meeting at Pomfret, James acted as a kind of a mediator between the English and his own subjects, to whom he fully laid himself open; but, in the mean time, the English regency issued a commission for settling the terms upon which James was to be restored, if he and his commissioners should lay a proper foundation for such a treaty. The English commissioners, were the bishops of Durham and Worcester, the earls of Northumberland and Westmoreland, the lords Nevil, Cornwall, and Chaworth, with master John Wodeham, and Robert Waterton. The instructions they received form one of the most curious passages of this history; and we shall here give them, as they are necessary for confirming all we have said concerning the dispositions of the two courts at this juncture.

First, To make a faint opposition to any private conference between the king of Scotland and the Scotch commissioners.

Scotland. Secondly, To demand that, before the said king shall have his full liberty, the kingdom of Scotland should pay to the English government at least thirty-six thousand pounds as an equivalent, at two thousand pounds a-year, for the entertainment of King James, who was maintained by the court of England, and not to abate any thing of that sum; but if possible to get forty thousand pounds.

Thirdly, That if the Scots should agree to the payment of the said sum, the English commissioners should take sufficient security and hostages for the payment of the same; and that if they should not (as there was great reason for believing they would) be so far mollified, by such easy terms, as to offer to enter upon a negociation for a final and perpetual peace between the two people, that then the English should propose the same in the most handsome manner they could. Farther, that if such difficulties should arise as might make it impracticable immediately to conclude such perpetual peace, that the English ambassadors should, under pretence of paving a way for the same, propose a long truce.

Fourthly, That in case the English commissioners should succeed in bringing the Scots to agree to the said truce, they should further urge, that they should not send to Charles of France, or to any of the enemies of England, any succours by sea or land. Farther, that the said English commissioners should employ their utmost endeavours to procure the recal of the troops already furnished by the Scots to France. The English are commanded to insist very strenuously upon this point, but with discretion.

Fifthly, If the Scots should, as a further bond of amity between the two nations, propose a marriage between their king and some noblewoman of England, the English commissioners are to make answer, "That the king of the Scots is well acquainted with many noblewomen, and even those of the blood-royal, in England; and that if the king of the Scots shall please to open his mind more freely on that head, the English commissioners shall be very ready to enter upon conferences thereupon." But (continues the record) in case the Scotch commissioners should make no mention of any such alliance by marriage, it will not appear decent for the English to mention the same, because the women of England, at least the noblewomen, are not used to offer themselves in marriage to men.

Sixthly, If there should be any mention made concerning reparation of damages, that the commissioners should then proceed upon the same as they should think most proper; and that they should have power to offer safe-conduct to as many of the Scots as should be demanded, for to repair to the court of England. Those instructions are dated at Westminster, July 6th 1423.

Nothing definitive was concluded at this treaty, but that another meeting should be held at York instead of Pomfret. This meeting accordingly took place. The English commissioners were, Thomas bishop of Durham, chancellor of England, Philip bishop of Winchester, Henry Percy earl of Northumberland, and Mr John Wodeham. Those for Scotland were, William bishop of Glasgow, George earl of March, James Douglas of Balveny, his brother Patrick abbot of Cambuskenneth, John abbot of Balmerino, Sir Patrick Dun-

Scotland. bar of Bele, Sir Robert Lauder of Edrington, Mr George Borthwic archdeacon of Glasgow, and Patric Houston canon of Glasgow. On the tenth of September, after their meeting, they came to the following agreement:

First, That the king of Scotland and his heirs, as an equivalent for his entertainment while in England, should pay to the king of England and his heirs, at London, in the church of St Paul, by equal proportions, the sum of forty thousand pounds Sterling.

Secondly, That the first payment, amounting to the sum of ten thousand merks, should be made six months after the king of Scotland's entering his own kingdom; that the like sum should be paid the next year, and so on during the space of six years, when the whole sum would be cleared; unless, after payment of forty thousand merks, the last payment of ten thousand should be remitted, at the intreaty of the most illustrious prince Thomas duke of Exeter.

Thirdly, That the king of Scotland, before entering his own kingdom, should give sufficient hostages for performance on his part. But, in regard that the Scots plenipotentiaries had no instructions concerning hostages, it was agreed,

Fourthly, That the king of Scotland should be at Branspath, or Durham, by the first of March next, where he should be attended by the nobles of his blood, and other subjects, in order to fix the number and quality of the hostages.

Fifthly, That, to cement and perpetuate the amity of the two kingdoms, the governor of Scotland should send ambassadors to London, with power to conclude a contract of marriage between the king of Scotland and some lady of the first quality in England.

James, it is probable, had already fixed his choice upon the lady Joan, daughter to the late earl of Somerset, who was son to John of Gaunt duke of Lancaster, by his second marriage; but he made his people the compliment, not only of consulting their opinion, but of concluding the match. The commissioners, after their agreement at York, proceeded towards London; and Thomas Somerville of Carnwath, with Walter Ogilvy, were added to their number. Being arrived at that capital, they ratified the former articles, and undertook for their king, that he should deliver his hostages to the king of England's officers, in the city of Durham, before the last day of the ensuing month of March; that he should also deliver to the said officers four obligatory letters, for the whole sum of 40,000 l. from the four burghs of Edinburgh, Perth, Dundee, and Aberdeen; that he should give his obligatory letter to the same purpose, before removing from Durham, and should renew the same four days after his arrival in his own kingdom; that the hostages might be changed from time to time for others of the same fortune and quality; that if any of them should die in England, others should be sent thither in their room; and that while they continued to stay in England, they should live at their own charges.

The marriage of James with the lady Joan Beaufort was celebrated in the beginning of February 1424. The young king of England presented him with a suit of cloth of gold for the ceremony; and the next day he received a legal discharge of 10,000 pounds, to be deducted from the 40,000 at which his ransom

was fixed, and which sum was given as the marriage-portion of the lady. The ceremony being performed, the king and queen set out for Durham, where the hostages were waiting; and arrived at his own dominions, along with the earl of Northumberland and the chief of the northern nobility, who attended him with great pomp. On the 20th of April the same year, he was crowned at Scone; after which ceremony, he followed the example practised by other sovereigns at that time, of knighting several noblemen and gentlemen.

During the dependence of the treaty for James's release, the Scots had emigrated to France in such numbers, that no fewer than 15,000 of them now appeared in arms under the duke of Touraine; but as the history of the war in that country has already been given under the article FRANCE, we shall take no farther notice of it at present, but return to the affairs of Scotland.

On his return James found himself in a disagreeable situation. The great maxim of the duke of Albany, when regent, had been to maintain himself in power by exempting the lower class of people from taxes of every kind. This plan had been continued by his son Murdoch; but as the latter was destitute of his father's abilities, the people abused their happiness, and Scotland became such a scene of rapine, that no commoner could say he had a property in his own estate. The Stewart family, on their accession to the crown of Scotland, were possessed of a very considerable patrimonial estate, independent of the standing revenues of the crown, which consisted chiefly of customs, wards, and reliefs. The revenues of the paternal estate belonging to James, had they been regularly transmitted to him, would have more than maintained him in a splendour equal to his dignity, while he was in England; nor would he in that case have had any occasion for an allowance from the king of England. But as the duke of Albany never intended that his nephew should return, he parcelled out among his favourites the estate of the Stewart family, in such a manner that James upon his return found all his patrimonial revenues gone, and many of them in the hands of his best friends; so that he had nothing to depend on for the support of himself and his court but the crown-revenues above-mentioned, and even some of these had been mortgaged during the late regency. This circumstance, of itself sufficiently disagreeable, was attended with two others, which tended to make it more so. The one was, that the hostages which had been left for the king's ransom in England, being all of them persons of the first rank, were attended by their wives, families, children, and equipages, which rivalled those of the same rank in England, and drew a great deal of ready money out of the nation. The other circumstance arose from the charge of the Scots army in France; where Charles, who had never been in a condition to support it, was now reduced to the utmost necessity: while the revenues of James himself were both scanty and precarious. To remedy these inconveniences, therefore, the king obtained from his parliament an act obliging the sheriffs of the respective counties to inquire what lands and estates had belonged to his ancestors David II. Robert II. and Robert III.; and James formed a resolution of resuming these lands wherever they could be discovered, without regard to persons or circumstances. On this

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He reforms several abuses in Scotland.

Scotland. occasion many of the most illustrious personages in the kingdom were arrested: the duke of Albany, his two sons, and the earl of Lennox the duke's father-in-law, were put to death, though their crimes are not specified by historians. Buchanan mentions a tradition, that James barbarously sent to the countess of Lennox the heads of her father, husband, and sons; for the following more barbarous reason, that in the bitterness of her grief she might drop some expressions tending to involve others in the same catastrophe. The countess, however, calmly said, "That, if the charges against the criminals were proved, they deserved their fate."

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Several of
the nobility
executed.

James now proceeded with great spirit to reform the abuses which had pervaded every department of the state, protected and encouraged learning and learned men, and even kept a diary in which he wrote down the names of all the learned men whom he thought deserving of his encouragement. James himself wrote some poetry; and in music was such an excellent composer, that he is with good reason looked upon as the father of Scots music, which has been so much admired for its elegant simplicity. He introduced organs into his chapels, and a much better style of architecture into all buildings whether civil or religious. Neither did he confine his cares to the fine arts, but encouraged and protected those of all kinds which were useful to society; and, in short, he did more towards the civilization of his people than had been done by any of his predecessors.

In the mean time the truce continued with England. James, however, seemed not to have any inclination to enter into a perpetual alliance with that kingdom. On the contrary, in 1428, he entered into a treaty with France; by which it was agreed, that a marriage should be concluded between the dauphin of France, afterwards Louis XI. and the young princess of Scotland; and so great was the necessity of king Charles for troops at that time, that he demanded only 6000 forces as a portion for the princess.

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The king
murdered.

The rest of the reign of James was spent in reforming abuses, curbing the authority of the great barons, and recovering the royal estates out of the hands of usurpers. In this, however, he used so much severity, that he was at last murdered, in the year 1437. The perpetrators of this murder were the earl of Athol; Robert Grahame, who was connected with the earl, and who was discontented on account of his losing the estate of Strathern, which had been re-annexed to the crown; and Robert, grandchild and heir to the earl of Athol, and one of the king's domestics. The king had dismissed his army, without even reserving to himself a body-guard, and was at supper in a Dominican convent in the neighbourhood of Perth. Grahame had for some time been at the head of a gang of outlaws, and is said to have brought a party of them to Perth in the dead of the night, where he posted them near the convent. Walter Straton, one of the king's cup-bearers, went to bring some wine to the king while at supper; but perceiving armed men standing in the passage, he gave the alarm, and was immediately killed. Catharine Douglas, one of the queen's maids of honour, ran to bolt the outer door; but the bar was taken away by Robert Stuart, in order to facilitate the entrance of the murderers. The lady thrust her arm into the sta-

ple; but it was instantly broken, and the conspirators rushed in upon the king. Patric Dunbar, brother to the earl of March, was killed in attempting to defend his sovereign, and the queen received two wounds in attempting to interpose herself betwixt her husband and the daggers of the assassins. James defended himself as long as he could; but at last expired under the repeated strokes of his murderers, after having received 28 wounds.

Scotland.

After the murder of James I. the crown devolved upon his son James II. at that time only seven years of age. A parliament was immediately called by the queen-mother, at which the most cruel punishments were decreed to the murderers of the late king. The crime, no doubt, deserved an exemplary punishment; but the barbarities inflicted on some of those wretches are shocking to relate. Within less than six weeks after the death of the king, all the conspirators were brought to Edinburgh, arraigned, condemned, and executed. The meaner sort were hanged; but on the earl of Athol and Robert Graham the most cruel torments were inflicted, such as pinching with hot irons, dislocation of the joints, &c. The earl of Athol, had, besides, a crown of red-hot iron put on his head; and was afterwards cut up alive, his heart taken out, and thrown into a fire. In short, so dreadful were these punishments, that Æneas Sylvius, the pope's nuncio, who beheld them, said, that he was at a loss to determine whether the crime committed by the regicides, or the punishment inflicted upon them, was the greater.

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Succeeded
ed by
James II.

As the late king had prescribed no form of a regency in case of his death, the settlement of the government became a matter of great difficulty as well as importance. Archibald earl of Douglas, who had been created Duke of Touraine in France, was by far the greatest subject in the kingdom; but as he had not been a favourite in the preceding reign, and the people were now disgusted with regencies, he was not formally appointed to the administration, though by his high rank he in fact enjoyed the supreme power as long as he lived; which, however, was but a short time. He died the same year (1438); and Sir Alexander Livingstone of Callendar was appointed to succeed him as governor of the kingdom, that is, to have the executive power, while William Crichton, as chancellor, had the direction of the civil courts. This was a most unfortunate partition of power for the public. The governor and chancellor quarrelled; the latter took possession of the king's person and the castle of Edinburgh, to neither of which he had any right; but the former had on his side the queen-mother, a woman of intrigue and spirit. Her son was shut up in the castle of Edinburgh; and in a short time there was no appearance either of law or government in Scotland. The governor's edicts were counteracted by those of the chancellor under the king's name, and those who obeyed the chancellor were punished by the governor; while the young earl of Douglas, with his numerous followers and dependents, was a declared enemy of both parties, whom he equally sought to destroy.

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Supreme
power di-
vided be-
tween the
governor
and chan-
cellor of the
kingdom.

The queen-mother demanded access to her son, which Crichton could find no pretext for denying her; and she was accordingly admitted with a small train into the castle of Edinburgh. She played her part so well, and

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The queen-
mother sets
her son at
liberty.

Scotland.

and dissembled with so much art, that the chancellor, imagining she had become a convert to his cause, treated her with unbounded confidence, and suffered her at all hours to have free access to her son's person. Pretending that she had vowed a pilgrimage to the white church of Buchan, she recommended the care of her son's person, till her return, to the chancellor, in the most pathetic and affectionate terms: but, in the mean time, she secretly sent him to Leith, packed up in a clothes-chest; and both she and James were received at Stirling by the governor before the escape was known. As every thing had been managed in concert with Livingston, he immediately called together his friends; and laying before them the tyrannical behaviour of the chancellor, it was resolved to besiege him in the castle of Edinburgh, the queen promising to open her own granaries for the use of the army. The chancellor foresaw the storm that was likely to fall upon him, and sought to prevent it by applying to the earl of Douglas. That haughty nobleman answered him in the terms already mentioned, and that he was preparing to exterminate both parties. The siege of Edinburgh castle being formed, the chancellor demanded a parley, and to have a personal interview with the governor; which the latter, who was no stranger to the sentiments of Douglas, readily agreed to. Common danger united them in a common cause; and the chancellor resigning to the other the custody of the castle and the king's person, with the highest professions of duty and loyalty, the two competitors swore an inviolable friendship for each other. Next day the king cemented their union, by confirming both of them in their respective charges.

292
Intestine
broils.

The lawless example of the earl of Douglas encouraged the other great landholders to gratify their private animosities, sometimes at the expence of their honour as well as their humanity. A family-difference happened between Sir Allan Stuart of Darnley, and Thomas Boyd of Kilmarnock; but it was concluded that both parties should come to a peaceable agreement at Polmaisthorpe, between Linlithgow and Falkirk, where Stuart was treacherously murdered by his enemy. Stuart's death was revenged by his brother, Sir Alexander Stuart of Beilmouth, who challenged Boyd to a pitched battle, the principals being attended by a retinue which carried the resemblance of small armies. The conflict was fierce and bloody, each party retiring in its turn, and charging with fresh fury; but at last victory declared itself for Stuart, the bravest of Boyd's attendants being cut off in the field. About this time, the islanders, under two of their chieftains, Lauchlan Maclean and Murdoc Gibson, notorious freebooters, invaded Scotland, and ravaged the province of Lenox with fire and sword. They were opposed by John Colquhoun of Luss, whom they slew, some say treacherously, and others, in an engagement at Lochlomond, near Inchmartin. After this, the robbers grew more outrageous than ever, not only filling all the neighbouring country with rapine, but murdering the aged, infants, and the defenceless of both sexes. At last, all the labouring hands in the kingdom being engaged in domestic broils, none were left for agriculture; and a dreadful famine ensued, which was attended, as usual, by a pestilence. James was now about ten years of age; and the wisest part of the kingdom agreed, that

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the public distresses were owing to a total disrespect of the royal authority. The young earl of Douglas never had fewer than 1000, and sometimes 2000 horse in his train; so that none was found hardy enough to controul him. He pretended to be independent of the king and his courts of law; that he had a right of judicature upon his own large estates; and that he was entitled to the exercise of royal power. In consequence of this he issued his orders, gave protections to thieves and murderers, affected to brave the king, made knights, and, according to some writers, even noblemen, of his own dependents, with a power of sitting in parliament.

The queen-mother was not wholly guiltless of those abuses. She had fallen in love with and married Sir James Stuart, who was commonly called the *Black Knight of Lorn*, brother to the lord of that title, and a descendant of the house of Darnley. Affection for her husband caused her to renew her political intrigues; and not finding a ready compliance in the governor, her interest inclined towards the party of the Douglasses. The governor sought to strengthen his authority by restoring the exercise of the civil power, and the reverence due to the person of the sovereign.

The conduct of the lord Callendar was in many respects not so defensible, either as to prudence or policy. When the queen expressed her inclination that her husband might be admitted to some part of the administration, the governor threw both him and his brother the lord Lorn into prison, on a charge of undutiful practices against the state, and abetting the earl of Douglas in his enormities. The queen, taking fire at her husband's imprisonment, was herself confined in a mean apartment within the castle of Stirling; and a convention of the states was called, to judge in what manner she was to be proceeded against. The case was unprecedented and difficult; nor can we believe the governor would have carried matters to such extremity, had he not had strong evidences of her illegal behaviour. She was even obliged to dissemble her resentment, by making an open profession before the states, that she had always been entirely innocent of her husband's practices, and that she would for the future behave as a peaceable and dutiful subject to the laws and the sovereign. Upon making this purgation (as B. Lindfay calls it), she was released, as also her husband and his brother, being bailed by the chancellor and the lord Gordon, who became sureties for their good behaviour in the penalty of 4000 merks. The governor was afterwards accused of many arbitrary and partial acts of power: and indeed, if we consider his situation, and the violence of the parties which then divided Scotland, it was almost impossible, consistently with his own safety, to have exerted the virtues either of patriotism or moderation.

The chancellor was exceedingly vexed at the small regard which the governor paid to his person and dignity, and secretly connected himself with the queen-mother; but in the mean time he remained at Edinburgh. The king and his mother continued all this time at Stirling; where the governor, on pretence of consulting the public safety, and that of the king's person, maintained a strong guard, part of which attended James in his juvenile exercises and diversions. The queen-mother did not fail to represent this to her

293
The queen-mother and her husband imprisoned.

294
are released.

Scotland.
295
The chan-
cellor gets
the king's
person into
his hands.

son as a restraint upon his liberty; and obtained his consent to put himself into the chancellor's hands. The latter, who was a man of activity and courage, knew well how to avail himself of this permission; and crossing the Forth in the dark with a strong body of horse, they surrounded the king as he was hunting next morning by break of day. It was easy to perceive from the behaviour of James, that he was no stranger to the chancellor's attempt; but some of the king's guard offering to dispute the possession of his person, Sir William Livingston, the governor's eldest son, restrained them, and suffered the king to depart quietly. This surprisal happened on a day when the governor was absent from Stirling; and the chancellor, to make sure of his royal acquisition, entered Edinburgh at the head of 4000 horse, where the king and he were received by the citizens with loud acclamations of joy.

296
Rebellious
behaviour
of the earl
of Douglas.

The governor showed no emotion at what had happened; on the contrary, he invited the chancellor to an interview, and settled all differences with him in an amicable manner. The young lord Douglas, however, continued to brave both parties. As if he had been a sovereign prince, he demanded by his ambassadors, Malcolm Fleming of Cumbernault, and Allan Lawder, the investiture of the sovereignty of Touraine from Charles the seventh of France; which being readily granted him, served to increase his pride and insolence. The first-fruits of the accommodation between the two great officers of state was the holding of a parliament at Edinburgh, for redressing the public disorders occasioned by the earl of Douglas; and encouragement was given to all persons who had been injured to make their complaints. The numbers which on that occasion resorted to Edinburgh were incredible; parents, children, and women, demanding vengeance for the murder of their relations, or the plunder of their estates; till, by the multiplicity of their complaints, they became without remedy, none being found bold enough to encounter the earl of Douglas, or to endeavour to bring him to a fair trial. The parties therefore were dismissed without relief, and it was resolved to proceed with the haughty earl in a different manner. Letters were written to him by the governor and chancellor, and in the name of the states, requesting him to appear with his friends in parliament, and to take that lead in public affairs to which they were intitled by their high rank and great possessions. The manner in which those letters were penned made the thoughtless earl consider them as a tribute due to his greatness, and as proceeding from the inability of the government to continue the administration of public affairs without his countenance and direction. Without dreaming that any man in Scotland would be so bold as to attack him, even single or unarmed, he answered the letters of the chancellor and governor, by assuring them that he intended to set out for Edinburgh: the chancellor, on pretence of doing him honour, but in reality to quiet his suspicions, met him while he was on his journey; and inviting him to his castle of Crichton, he there entertained him for some days with the greatest magnificence and appearance of hospitality. The earl of Douglas believed all the chancellor's professions of friendship, and even sharply checked the wisest of his followers, who counselled him not to depend too much on appearances, or to trust his brother and himself at

the same time in any place where the chancellor had power. The latter had not only removed the earl's suspicion, but had made him a kind of convert to patriotism, by painting to him the miseries of his country, and the glory that must redound to him and his friends in removing them. It was in vain for his attendants to remind him of his father's maxim, never to risk himself and his brother at the same time: he without hesitation attended the chancellor to Edinburgh; and being admitted into the castle, they dined at the same table with the king. Towards the end of the entertainment, a bull's head, the certain prelude of immediate death, was served up. The earl and his brother started to their feet, and endeavoured to make their escape: but armed men rushing in, overpowered them, and tying their hands and those of Sir Malcolm Fleming with cords, they were carried to the hill and beheaded. The young king endeavoured with tears to procure their pardon; for which he was severely checked by his unrelenting chancellor.

297
Is put to
death with
his brother.

In 1443, the king being arrived at the age of 14, declared himself out of the years of minority, and took upon himself the administration of affairs. He appears to have been a prince of great spirit and resolution; and he had occasion for it. He had appointed one Robert Sempil of Fulwood to be chief governor of the castle of Dumbarton; but he was killed by one Galbraeth (a noted partizan of the earl of Douglas), who seized upon the government of the castle. The popularity of the family of Douglas having somewhat subsided, and the young earl finding himself not supported by the chief branches of his family, he began to think, now that the king was grown up, his safest course would be to return to his duty. He accordingly repaired to the king at Stirling; and voluntarily throwing himself at his majesty's feet, implored his pardon for all his transgressions, and solemnly promised that he would ever after set a pattern of duty and loyalty to all the rest of his subjects. The king, finding that he insisted on no terms but that of pardon, and that he had unconditionally put himself into his power, not only granted his request, but made him the partner of his inmost councils.

298
The young
earl submits
to the king,
and is re-
ceived into
favour.

James had always disliked the murder of the earl of Douglas and his brother; and the chancellor, perceiving the ascendancy which this earl was daily gaining at court, thought it high time to provide for his own safety. He therefore resigned the great seal, and retired to the castle of Edinburgh, the custody of which he pretended had been granted to him by the late king during his life, or till the present king should arrive at the age of 21; and prepared it for a siege. The lord Callendar, who knew himself equally obnoxious as Crichton was to the earl of Douglas, and that he could not maintain his footing by himself, resigned likewise all his posts, and retired to one of his own houses, but kept possession of the castle of Stirling. As both that and the castle of Edinburgh were royal forts, the two lords were summoned to surrender them; but instead of complying, they justified their conduct by the great power of their enemies, who sought their destruction, and who had been so lately at the head of robbers and outlaws; but promised to surrender themselves to the king as soon as he was of lawful age, (meaning, we suppose, either 18 or 21). This answer being deemed

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Great dis-
turbances
in Scot-
land.

con-

Scotland. contumacious, the chancellor and the late governor, with his two sons Sir Alexander and Sir James Livingston, were proclaimed traitors in a parliament which was summoned on purpose to be held at Stirling. In another parliament held at Perth the same year, an act passed, that all the lands and goods which had belonged to the late king should be possessed by the present king to the time of his lawful age, which is not specified. This act was levelled against the late governor and chancellor, who were accused of having alienated to their own uses, or to those of their friends, a great part of the royal effects and jewels; and their estates being confiscated, the execution of the sentence was committed to John Forrester of Corstorphin, and other adherents of the earl of Douglas.

This sentence threw all the nation into a flame. The castle of Crichton was besieged; and being surrendered upon the king's summons and the display of the royal banner, it was levelled with the ground. It soon appeared that the governor and chancellor, the latter especially, had many friends; and in particular Kennedy bishop of St Andrew's, nephew to James the first, who sided with them from the dread and hatred they bore to the earl of Douglas and his family. Crichton thus soon found himself at the head of a body of men; and while Forrester was carrying fire and sword into his estates and those of the late governor, his own lands and those of the Douglasses were overrun. Corstorphin, Abercorn, Blackness, and other places, were plundered; and Crichton carried off from them more booty than he and his adherents had lost. Particular mention is made of a fine breed of mares which Douglas had lost on this occasion. That nobleman was so much exasperated by the great damages he had sustained, that he engaged his friends the earl of Crawford and Alexander Ogilvy of Innerquharity, to lay waste the lands of the bishop of St Andrew's, whom he considered as the chief support of the two ministers. This prelate was not more considerable by his high birth, than he was venerable by his virtue and sanctity; and had, from a principle of conscience, opposed the earl of Douglas and his party. Being conscious he had done nothing that was illegal, he first admonished the earl of Crawford and his coadjutor to desist from destroying his lands; but finding his admonitions ineffectual, he laid the earl under an excommunication.

That nobleman was almost as formidable in the northern, as the earl of Douglas had been in the southern, parts of Scotland. The benedictine monks of Aberbrothwic, who were possessed of great property, had chosen Alexander Lindsay, his eldest son, to be the judge or bailiff of their temporalities; as they themselves, by their profession, could not sit in civil or criminal courts. Lindsay proved so chargeable, by the great number of his attendants, and his high manner of living, to the monks, that their chapter removed him from his post, and substituted in his place Alexander Ogilvy of Innerquharity, guardian to his nephew John Ogilvy of Airley, who had an hereditary claim upon the bailiwick. This, notwithstanding their former intimacy, created an irreconcilable difference between the two families. Each competitor strengthened himself by calling in the assistance of his friends; and the Lord Gordon taking part with the Ogilvies, to whom he was

Scotland. then paying a visit, both parties immediately mustered in the neighbourhood of Aberbrothwic. The earl of Crawford, who was then at Dundee, immediately posted to Aberbrothwic, and placing himself between the two armies, he demanded to speak with Ogilvy; but, before his request could be granted, he was killed by a common soldier, who was ignorant of his quality. His death exasperated his friends, who immediately rushed on their enemies; and a bloody conflict ensued, which ended to the advantage of the Lindsays, that is, the earl of Crawford's party. On that of the Ogilvies were killed Sir John Oliphant of Aberdargy, John Forbes of Pittligo, Alexander Barclay of Gartley, Robert Maxwell of Teling, Duncan Campbell of Campbellfether, William Gordon of Burrowfield, and others. With those gentlemen, about 500 of their followers are said to have fallen; but some accounts diminish that number. Innerquharity himself, in flying, was taken prisoner, and carried to the earl of Crawford's house at Finhaven, where he died of his wounds; but the Lord Gordon (or, as others call him, the earl of Huntley) escaped by the swiftness of his horse.

This battle seems to have let loose the fury of civil discord all over the kingdom. No regard was paid to magistracy, nor to any description of men but that of clergy. The most numerous, fiercest, and best allied family, wreaked its vengeance on its foes, either by force or treachery; and the enmity that actuated the parties, stifled every sentiment of honour, and every feeling of humanity. The Lindsays, secretly abetted and strengthened by the earl of Douglas, made no other use of their victory than carrying fire and sword through the estates of their enemies; and thus all the north of Scotland presented scenes of murder and devastation. In the west, Robert Boyd of Duchal, governor of Dumbarton, treacherously surprised Sir James Stuart of Achmynto, and treated his wife with such inhumanity, that she expired in three days under her confinement in Dumbarton castle. The castle of Dunbar was taken by Patrick Hepburn of Hales. Alexander Dunbar dispossessed the latter of his castle of Hales; but it was retaken by the partisans of the earl of Douglas, whose tenants, particularly those of Annandale, are said to have behaved at that time with peculiar fierceness and cruelty. At last, the gentlemen of the country, who were unconnected with those robbers and murderers, which happened to be the case with many, shut themselves up in their several houses; each of which, in those days, was a petty fortress, which they victualled, and provided in the best manner they could for their own defence. This wise resolution seems to have been the first measure that composed the public commotions.

The earl of Douglas, whose power and influence at court still continued, was sensible that the clergy, with the wiser and more disinterested part of the kingdom, considered him as the source of the dreadful calamities which the nation suffered; and that James himself, when better informed, would be of the same opinion. He therefore sought to avail himself of the juncture, by forming secret but strong connections with the earls of Crawford, Ross, and other great noblemen, who wanted to see their feudal powers restored to their full vigour. The queen-dowager and her husband made little or no figure during this season of public confusion: she

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had retired to the castle of Dunbar, while it was in Hepburn's possession, where she died soon after. She left by her second husband three sons; John, who in 1455 was made earl of Athol, by his uterine brother the king; James, who under the next reign, in 1469, was created earl of Buchan; and Andrew, who afterwards became bishop of Murray. As the earl of Douglas was an enemy to the queen-dowager's husband, the latter retired to England, where he obtained a pass to go abroad, with 20 in his train; but being taken at sea by the Flemish pirates, he died in his confinement.

The great point between the king and Sir William Crichton, whether the latter should give up the castle to his majesty, remained still undecided; and by the advice and direction of the earl of Douglas, who had been created lord-lieutenant of the kingdom, it had now suffered a nine months siege. Either the strength of the castle, or an opinion entertained by Douglas that Crichton would be a valuable acquisition to his party, procured better terms for the latter than he could otherwise have expected; for he and his followers were offered a full indemnity for all past offences, and a promise was made that he should be restored not only to the king's favour, but to his former post of chancellor. He accepted of the conditions; but refused to act in any public capacity till they were confirmed by a parliament, which was soon after held at Perth, and in which he was restored to his estate and honours. By this reconciliation between Douglas and Crichton, the former was left at full liberty to prosecute his vengeance against the Lord Callendar, the late governor, his friends and family. That vengeance was exercised with rigour. The governor himself, Sir James Dundas of Dundas, and Sir Robert Bruce of Clackmannan, were forced to save their lives by the loss of their estates; but even that could not preserve their liberty, for they were sent prisoners to the castle of Dumbarton. The fate of Alexander, the governor's eldest son, and of two other gentlemen of his name and family, was still more lamentable; for they were condemned to lose their heads. Those severities being inflicted after the king had in a manner readmitted the sufferers into his favour, swelled the public outcry against the earl of Douglas. We have in Lindsay an extract of the speech which Alexander Livingston, one of the most accomplished gentlemen of his time, made upon the scaffold, in which he complained, with great bitterness, of the cruel treatment his father, himself, and his friends, had undergone; and that he suffered by a packed jury of his enemies.

300
Invasion of
Scotland
by the Eng-
lish.

The king being now about 18 years of age, it was thought proper that a suitable consort should be provided for him; and, after various consultations, Mary, the daughter of Arnold duke of Gueldres, was chosen, at the recommendation of Charles king of France, though the marriage was not completed till some time after. This produced an immediate rupture with England. The earls of Salisbury and Northumberland entered Scotland at the head of two separate bodies. The former burnt the town of Dumfries, as the latter did that of Dunbar; while Sir John Douglas of Balveny made reprisals by plundering the county of Cumberland, and burning Alnwick. Upon the return of the English armies to their own country, additional levies were made, and a fresh invasion of Scotland was resolved up-

Scotland.

on under the earl of Northumberland, who had along with him a lieutenant, whom the Scots of those days, from the bushiness and colour of his beard, called *Magnus with the red mane*. He was a soldier of fortune, but an excellent officer, having been trained in the French wars; and he is said to have demanded no other recompense for his services from the English court, but that he should enjoy all he could conquer in Scotland. The Scots, in the mean time, had raised an army commanded by George Douglas earl of Ormond, and under him by Wallace of Craigie, with the Lords Maxwell and Johnston. The English having passed Solway Frith, ravaged all that part of the country which belonged to the Scots; but hearing that the earl of Ormond's army was approaching, called in their parties, and fixed their camp on the banks of the river Sark. Their advanced guard was commanded by Magnus; their centre by the earl of Northumberland; and the rear, which was composed of Welch, by Sir John Pennington, an officer of courage and experience.

The Scots drew up in three divisions likewise. Their right wing was commanded by Wallace, the centre by the earl of Ormond, and their left wing by the Lords Maxwell and Johnston. Before the battle joined, the earl of Ormond harangued his men, and inspired them with very high resentment against the English, who, he said, had treacherously broken the truce. The signal for battle being given, the Scots under Wallace rushed forward upon their enemies: but, as usual, were received by so terrible a discharge from the English archers, that their impetuosity must have been stopped, had not their brave leader Wallace put them in mind, that their forefathers had always been defeated in distant fights by the English, and that they ought to trust to their swords and spears; commanding them at the same time to follow his example. They obeyed, and broke in upon the English commanded by Magnus, with such fury, as soon fixed the fortune of the day on the side of the Scots, their valour being suitably seconded by their other two divisions. The slaughter (which was the more considerable as both parties fought with the utmost animosity) fell chiefly upon the division commanded by Magnus, who was killed, performing the part of a brave officer; and all his body-guard, consisting of picked soldiers, were cut in pieces.

301
The battle
of Sark.

The battle then became general: Sir John Pennington's division, with that under the earl of Northumberland, was likewise routed; and the whole English army, struck by the loss of their champion, fled towards the Solway, where, the river being swelled by the tide, numbers of them were drowned. The loss of the English in slain amounted to at least 3000 men. Among the prisoners were Sir John Pennington, Sir Robert Harrington, and the earl of Northumberland's eldest son the Lord Percy, who lost his own liberty in forwarding his father's escape. Of the Scots about 600 were killed; but none of note, excepting the brave Wallace, who died three months after of the wounds he had received in this battle. The booty that was made on this occasion is said to have been greater than any that has fallen to the Scots since the battle of Bannockburn.

302
The Eng-
lish entirely
defeated.

The rest of the history of this reign consists almost entirely of a relation of the cabals and conspiracies of the great men. The earl of Douglas had entered into a

CON.

Scotland.

303
Rebellion
of the earl
of Dou-
glas and
others.

confederacy with the earls of Crawford, Moray, and Ross, and appeared on all occasions with such a train of followers as bade defiance to royal power itself. This insolence was detested by the wiser part of the nation; and one Maclellan, who is called the *Tutor of Bomby*, and was nephew to Sir Patrick Gray, captain of the king's guard, refused to give any attendance upon the earl, or to concur in his measures, but remained at home as a quiet subject. This inoffensive behaviour was by the earl considered as treason against himself; and violently seizing upon Maclellan's house and person, he sent him close prisoner to the castle of Douglas. As Maclellan was a gentleman of great worth and reputation, his uncle Gray applied earnestly to James in his favour; and such was that prince's regard for Maclellan, that he wrote and signed a letter for his release, addressed to the earl of Douglas. Upon Gray's delivering this letter to Douglas at his castle, the latter seemed to receive it with the highest respect, and to treat Gray with the greatest hospitality, by inviting him to dinner; but, in the mean time, he gave private orders that Maclellan's head should be struck off, and his body exposed upon the green before the castle covered with a linen cloth. After dinner, the earl told Gray, that he was ready to obey the king's commands; and conducting him to the green, he showed him the lifeless trunk, which he said Gray might dispose of as he pleased. Upon this, Gray mounted his horse, and trusted to his swiftness for his own safety; for he was pursued by the earl's attendants to the gates of Edinburgh.

The conspiracy against James's government was now no longer a secret. The Lords Balveny and Hamilton, with such a number of other barons and gentlemen, had acceded to it, that it was thought to be more powerful than all the force the king could bring into the field. Even Crichton advised James to dissemble. The confederates entered into a solemn bond and oath never to desert one another during life; and, to make use of Drummond's words, "That injuries done to any one of them should be done to them all, and be a common quarrel; neither should they desist, to their best abilities, to revenge them: that they should concur indifferently against whatsoever persons within or without the realm, and spend their lives, lands, goods, and fortunes, in defence of their debates and differences whatsoever." All who did not enter into this association were treated as enemies to the public; their lands were destroyed, their effects plundered, and they themselves imprisoned or murdered. Drummond says, that Douglas was then able to bring 40,000 men into the field; and that his intention was to have placed the crown of Scotland upon his own head. How far he might have been influenced by a scene of the same nature that was then passing between the houses of York and Lancaster in England, we shall not pretend to determine; though it does not appear that his intention was to wear the crown himself, but to render it despicable upon his sovereign's head. It is rather evident, from his behaviour, that he did not affect royalty; for when James invited him to a conference in the castle of Stirling, he offered to comply provided he had a safe conduct. This condition plainly implied, that he had no reliance upon the late act of parliament, which declared the proclamation of the king's peace to be a sufficient se-

curity for life and fortune to all his subjects; and there is no denying that the safe conduct was expedited in the form and manner required.

This being obtained, the earl began his march towards Stirling with his usual great retinue; and arrived there on Shrove-Tuesday. He was received by the king as if he had been the best of his friends, as well as the greatest of his subjects, and admitted to sup-³⁰⁴ with his majesty in the castle, while his attendants were dispersed in the town, little suspecting the catastrophe that followed. The entertainment being over, the king told the earl with an air of frankness, "That as he was now of age, he was resolved to be the father of all his people, and to take the government into his own hands; that his lordship, therefore, had no reason to be under any apprehensions from his old enemies Callendar and Crichton; that there was no occasion to form any confederacies, as the law was ready to protect him; and that he was welcome to the principal direction of affairs under the crown, and to the first place in the royal confidence; nay, that all former offences done by himself and his friends should be pardoned and forgot."

This speech was the very reverse of what the earl of Douglas aimed at. It rendered him, indeed, the first subject of the kingdom; but still he was controulable by the civil law. In short, upon the king's peremptorily putting the question to him, he not only refused to dissolve the confederacy, but upbraided the king for his government. This produced a passionate rejoinder on the part of James; but the earl represented that he was under a safe conduct, and that the nature of his confederacy was such, that it could not be broken but by the common consent of all concerned. The king in-³⁰⁵ sisted upon his setting the example; and the earl con-^{The king kills him} tinuing more and more obstinate, James stabbed him with his own hand. finished the slaughter.

After the death of the earl of Douglas, the confederacy came to nothing. The insurgents excused themselves as being too weak for such an enterprise; and were contented with trailing the safe conduct at a horse's tail, and proclaiming, by trumpets and horns, the king a perjured traitor. They proceeded no farther; and each departed to his own habitation, after agreeing to assemble with fresh forces about the beginning of April. James lost no time in improving this short respite; and found the nation in general much better disposed in his favour than he had reason to expect. The intolerable oppressions of the great barons made his subjects esteem the civil, far preferable to the feudal, subjection: and even the Douglasses were divided among themselves; for the earl of Angus and Sir John Douglas of Dalkeith were among the most forward of the royalists. James at the same time wrote letters to the earl of Huntley, and to all the noblemen of his kingdom who were not parties in the confederacy, besides the ecclesiastics, who remained firmly attached to his prerogative. Before the effect of those letters could be known, the insurgents had returned to Stirling (where James still wisely kept himself upon the defensive); repeated their insolences, and the opprobrious treatment of his safe conduct; and at last they plundered the town, and laid it in ashes. Being still unable to take the castle, partly through their own divisions, and partly through the diversity of the opera-

Scotland.

tions they were obliged to supply, they left Stirling, and destroyed the estate of Sir John Douglas of Dalkeith, whom they considered as a double traitor, because he was a Douglas and a good subject. They then besieged his castle: but it was so bravely defended by Patrick Cockburn, a gentleman of the family of Langton, that they raised the siege; which gave the royal party farther leisure for humbling them.

All this time the unhappy country was suffering the most cruel devastations; for matters were now come to such extremity, that it was necessary for every man to be a royalist or a rebel. The king was obliged to keep on the defensive; and though he had ventured to leave the castle of Stirling, he was in no condition to face the rebels in the field. They were in possession of all the strong passes by which his friends were to march to his assistance; and he even consulted with his attendants on the means of escaping to France, where he was sure of an hospitable reception. He was diverted from that resolution by bishop Kennedy and the earl of Angus, who was himself a Douglas, and prevailed upon to wait for the event of the earl of Huntley's attempts for his service. This nobleman, who was descended from the Seatons, but by marriage inherited the great estates of the Gordons in the north, had raised an army for James, to whose family he and his ancestors, by the Gordons as well as the Seatons, had been always remarkably devoted. James was not mistaken in the high opinion he had of Huntley; and in the mean time he issued circular letters to the chief ecclesiastics and bodies-politic of his kingdom, setting forth the necessity he was under to proceed as he had done, and his readiness to protect all his loyal subjects in their rights and privileges against the power of the Douglasses and their rebellious adherents. Before those letters could have any effect, the rebels had plundered the defenceless houses and estates of all who were not in their confederacy, and had proceeded with a fury that turned to the prejudice of their cause.

The indignation which the public had conceived against the king, for the violation of his safe conduct, began now to subside; and the behaviour of his enemies in some measure justified what had happened, or at least made the people suspect that James would not have proceeded as he did without the strongest provocation. The forces he had assembled being unable, as yet, to act offensively, he resolved to wait for the earl of Huntley, who by this time was at the head of a considerable army, and had begun his march southwards. He had been joined by the Forbeses, Ogilvies, Lesliees, Grants, Irvings, and other relations and dependents of his family; but having advanced as far as Brechin, he was opposed by the earl of Crawford, the chief ally of the earl of Douglas, who commanded the people of Angus, and all the adherents of the rebels in the neighbouring counties, headed by foreign officers. The two armies joining battle on the 18th of May, victory was for some time in suspense; till one Coloss of Bonny-moon, on whom Crawford had great dependence, but whom he had imprudently disobliged, came over to the royalists with the division he commanded, which was the best armed part of Crawford's army, consisting of battle-axes, broad-swords, and long spears. His defection gave the fortune of the day to the earl of Huntley, as it left the centre flank of Crawford's army en-

tirely exposed to the royalists. He himself lost one of his brothers; and fled with another, Sir John Lindsay, to his house at Finhaven, where it is reported that he broke out into the following ejaculation: "That he would be content to remain seven years in hell, to have in so timely a season done the king his matter that service the earl of Huntley had performed, and carry that applause and thanks he was to receive from him."

No author informs us of the loss of men on either side, though all agree that it was very considerable upon the whole. The earl of Huntley, particularly, lost two brothers, William and Henry; and we are told, that, to indemnify him for his good services, as well as for the rewards and presents he had made in lands and privileges to his faithful followers, the king bestowed upon him the lands of Badenoch and Lochaber.

The battle of Brechin was not immediately decisive in favour of the king, but proved so in its consequences. The earl of Moray, a Douglas likewise, took advantage of Huntley's absence to harass and ravage the estates of all the royalists in the north; but Huntley returning from Brechin with his victorious army, drove his enemy into his own county of Moray, and afterwards expelled him even from thence. James was now encouraged, by the advice of his kinsman Kennedy bishop of St Andrew's, to whose firmness and prudence he was under great obligations, to proceed against the rebels in a legal manner, by holding a parliament at Edinburgh, to which the confederated lords were summoned; and upon their non-compearance, they were solemnly declared traitors. This proceeding seemed to make the rebellion rage more fiercely than ever; and at last, the confederates, in fact, disowned their allegiance to James. The earls of Douglas, Crawford, Ormond, Moray, the Lord Balveny, Sir James Hamilton, and others, signed with their own hands public manifestoes, which were pasted on the doors of the principal churches, importing, "That they were resolved never to obey command or charge, nor answer citation for the time coming; because the king, so far from being a just master, was a bloodfucker, a murderer, a transgressor of hospitality, and a surpriser of the innocent." It does not appear that those and the like atrocious proceedings did any service to the cause of the confederates. The earl of Huntley continued victorious in the north; where he and his followers, in revenge for the earl of Moray's having burnt his castle of Huntley, seized or ravaged all that nobleman's great estate north of the Spey. When he came to the town of Forres, he burnt one side of the town, because it belonged to the earl, and spared the other, because it was the property of his own friends. James thought himself, from the behaviour of the earl of Douglas and his adherents, now warranted to come to extremities; and marching into Annandale, he carried fire and sword through all the estates of the Douglasses there. The earl of Crawford, on the other hand, having now recruited his strength, destroyed the lands of all the people of Angus and of all others who had abandoned him at the battle of Brechin; though there is reason to believe, that he had already secretly resolved to throw himself upon the king's mercy.

Nothing but the most obstinate pride and resentment could have prevented the earl of Douglas, at this time, from taking the advice of his friends, by returning to his

306
Battle of
Brechin,
where the
rebels are
defeated.

307
The rebel
lion sup-
pressed.

308
Association
against the
king by the
earls of
Douglas,
Crawford,
&c.

Scotland.

his duty; in which case, James had given sufficient intimations that he might expect pardon. He coloured his contumacy with the specious pretext, that his brother's fate, and those of his two kinsmen, sufficiently instructed him never to trust to James or his ministers; that he had gone too far to think now of receding; and that kings, when once offended, as James had been, never pardoned in good earnest. Such were the chief reasons, with others of less consequence, which Drummond has put into the mouth of Douglas at this time. James, after his expedition into Annandale, found the season too far advanced to continue his operations; and returning to Edinburgh, he marched northwards to Angus, to reduce the earl of Crawford, who was the second rebel of power in the kingdom. That nobleman had hitherto deferred throwing himself at the king's feet, and had resumed his arms, in the manner related, only in hopes that better terms might be obtained from James for himself and his party. Perceiving that the earl of Douglas's obstinacy had cooled some other lords of the confederacy, and had put an end to all hopes of a treaty, he resolved to make a merit of breaking the confederacy, by being the first to submit. James having arrived in Angus, was continuing his march through the country, when the earl and some of his chief followers fell on their knees before him on the road, bareheaded and barefooted. Their dreary looks, their suppliant postures, and the tears which streamed abundantly from the earl, were expressive of the most abject contrition; which was followed by a penitential speech made by the earl, acknowledging his crimes, and imploring forgiveness.

James was then attended by his chief counsellors, particularly bishop Kennedy, who, he resolved, should have some share in the favour he meant to extend to the earl. He asked their advice; which proving to be on the merciful side, James promised to the earl and his followers restitution of all their estates and honours, and full pardon for all that had passed. The earl, as a grateful retribution for this favour, before the king left Angus, joined him with a noble troop of his friends and followers; and, attending him to the north, was extremely active in suppressing all the remains of the rebellion there.

The submission of the earl of Crawford was followed by that of the earl of Douglas; which, however, continued only for a short time. This powerful nobleman soon resumed his rebellious practices; and, in the year 1454, raised an army to fight against the king. The king erected his standard at St Andrew's; marched from thence to Falkland; and ordered all the forces of Fife, Angus, and Strathern, with those of the northern parts, to rendezvous by a certain day at Stirling; which they did to the number of 30,000. Douglas assembled his forces, which amounted to 40,000, some say 60,000 men, on the south side of the river Carron, about half way between Stirling and Abercorn. However, notwithstanding this superiority of force, the earl did not think it proper to fight his sovereign. Bishop Kennedy, the prelate of St Andrew's, had advised the king to divide his enemies by offering them pardon separately; and so good an effect had this, that in a few days the earl found himself deserted by all his numerous army, excepting about 100 of his nearest friends and domestics, with whom he retired towards England. His

friends had indeed advised him to come to a battle immediately; but the earl, for reasons now unknown, refused. However, in his journey southward, he raised a considerable body of forces, consisting of his own tenants, of outlaws, robbers, and borderers, with whom he renewed his depredations on the loyal subjects of the king. He was opposed by the earl of Angus, who, though of the name of Douglas, continued firm in the royal cause. An engagement ensued at Ancram-muir; where Douglas was entirely defeated, and he himself, with great difficulty, escaped to an adjacent wood. What his fate was after this battle does not appear; but it is certain that his estates were afterwards forfeited to the king.

The rest of the reign of James II. was spent in making proper regulations for the good of his people. In 1460 he was killed at the siege of Roxburgh castle, by the bursting of a cannon, to which he was too near when it was discharged. This siege he had undertaken in favour of the queen of England, who, after losing several battles, and being reduced to distress, was obliged to apply to James for relief. The nobility who were present concealed his death, for fear of discouraging the soldiers; and in a few hours after, the queen appeared in the camp, and presented her young son, James III. as their king.

James III. was not quite seven years of age at his accession to the crown. The administration naturally devolved on his mother; who pushed the siege of Roxburgh castle with so much vigour, that the garrison was obliged to capitulate in a few days; after which the army ravaged the country, and took and dismantled the castle of Wark.—In 1466, negotiations were begun for a marriage between the young king and Margaret princess of Denmark; and, in 1468, the following conditions were stipulated. 1. That the annual rent hitherto paid for the northern Isles of Orkney and Shetland should be for ever remitted and extinguished. 2. That king Christiern, then king of Denmark, should give 60,000 florins of gold for his daughter's portion, whereof 10,000 should be paid before her departure from Denmark; and that the islands of Orkney should be made over to the crown of Scotland, by way of pledge for the remainder; with this express proviso, that they should return to that of Norway after complete payment of the whole sum. 3. That king James should, in case of his dying before the said Margaret his spouse, leave her in possession of the palace of Linlithgow and castle of Down in Menteith, with all their appurtenances, and the third part of the ordinary revenues of the crown, to be enjoyed by her during life, in case she should choose to reside in Scotland. 4. But if she rather chose to return to Denmark, that in lieu of the said liferent, palace, and castle, she should accept of 120,000 florins of the Rhine; from which sum the 50,000 due for the remainder of her portion being deduced and allowed, the islands of Orkney should be reannexed to the crown of Norway as before.

When these articles were agreed upon, Christiern found himself unable to fulfil his part of them. Being at that time engaged in an unsuccessful war with Sweden, he could not advance the 10,000 florins which he had promised to pay down as part of his daughter's fortune. He was therefore obliged to apply to the plenipotentiaries to accept of 2000, and to take a farther

Scotland.

312
He is en-
tirely de-
feated.

313
King Ja. II.
killed by
accident.

314
James III.

315
Marriage-
treaty with
the princess
of Den-
mark.

309
Broken by
the earl of
Crawford.

310
Who is re-
ceived into
favour.

311
Earl Dou-
glas sub-
mits, but
rebels again.

Scotland. mortgage of the isles of Shetland for the other 8000.
 316 The Scottish plenipotentiaries, of whom Boyd earl of
 Disgrace of Arran was one, gratified him in his request; and this
 the earl of concession is thought to have proved fatal to the earl.
 Arran's fa- Certain it is, that his father was beheaded for treason-
 mily. able practices alleged to have been committed long be-
 fore, and for which he produced a parliamentary indem-
 nity to no purpose: the earl himself was divorced from
 his wife the king's sister, and obliged to live in perpe-
 tual exile, while the countess was married to another.

317
 Beginning
 of James's
 misfor-
 tunes.

In 1476, those misfortunes began to come on James
 which afterwards terminated in his ruin. He had made
 his brother, the duke of Albany, governor of Berwick;
 and had entrusted him with very extensive powers upon
 the borders, where a violent propensity for the feudal
 law still continued. The Humes and the Hepburns,
 then the most powerful subjects in those parts, could
 not brook the duke of Albany's greatness, especially
 after he had forced them, by virtue of a late act, to
 part with some of the estates which had been inconsi-
 derately granted them in this and the preceding reign.

318
 Is infatua-
 ted with the
 belief of
 astrology.

The pretended science of judicial astrology, by which
 James happened to be incredibly infatuated, was the ea-
 siest as well as most effectual engine that could work
 their purposes. One Andrew, an infamous impostor in
 that art, had been brought over from Flanders by
 James; and he and Schevez, then archbishop of St An-
 drew's, concurred in persuading James that the Scotch
 lion was to be devoured by his own whelps; a predic-
 tion that, to a prince of James's turn, amounted to a
 certainty.

The condition to which James reduced himself by
 his belief in judicial astrology, was truly deplorable.
 The princes upon the continent were smitten with the
 same infatuation; and the wretches who besieged his
 person had no safety but by continuing the delusion
 in his mind. According to Lindsay, Cochran, who
 had some knowledge of architecture, and had been in-
 troduced to James as a master-mason, privately pro-
 cured an old woman, who pretended to be a witch,
 and who heightened his terrors by declaring that his
 brothers intended to murder him. James believed her;
 and the unguarded manner in which the earl of Mar
 treated his weakness, exasperated him so much, that
 the earl giving a farther loose to his tongue in railing
 against his brother's unworthy favourites, was arrested,
 and committed to the castle of Craig Miller; from
 whence he was brought to the Canongate, a suburb of
 Edinburgh, where he suffered death.

319
 Death of
 the King's
 brother the
 earl of Mar.

320
 Duke of
 Albany ar-
 rested, but
 escapes.

The duke of Albany was at the castle of Dunbar
 when his brother the earl of Mar's tragedy was acted;
 and James could not be easy without having him like-
 wise in his power. In hopes of surprising him, he
 marched to Dunbar: but the duke, being apprized of
 his coming, fled to Berwick, and ordered his castle of
 Dunbar to be surrendered to the lord Evendale, though
 not before the garrison had provided themselves with
 boats and small vessels, in which they escaped to Eng-
 land. He ventured to come to Edinburgh; where
 James was so well served with spies, that he was seized,

and committed close prisoner to the castle, with orders
 that he should speak with none but in the presence of
 his keepers. The duke had probably suspected and
 provided against this disagreeable event; for we are
 told that he had agents, who every day repaired to the
 castle, as if they had come from court, and reported
 the state of matters between him and the king, while
 his keepers were present, in so favourable a light, that
 they made no doubt of his soon regaining his liberty,
 and being readmitted to his brother's favour. The
 seeming negociation, at last, went so prosperously on,
 that the duke gave his keepers a kind of a farewell en-
 tertainment, previous to his obtaining a formal delive-
 rance; and they drank so immoderately, that being in-
 toxicated, they gave him an opportunity of escaping
 over the castle wall, by converting the sheets of his bed
 into a rope. Whoever knows the situation of that for-
 tress, must be amazed at the boldness of this attempt;
 and we are told that the duke's valet, the only domest-
 ic he was allowed to have, making the experiment be-
 fore his master, broke his neck: upon which the duke,
 lengthening the rope, slid down unhurt; and carrying
 his servant on his back to a place of safety, he went on
 board a ship which his friends had provided, and esca-
 ped to France.

In 1482, the king began to feel the bad consequen-
 ces of taking into his favour men of worthless charac-
 ters, which seems to have been one of this prince's per-
 nicious foibles. His great favourite at this time was
 Cochran, whom he had raised to the dignity of earl of the king's
 Mar. All historians agree that this man made a most great fa-
 vourite.
 infamous use of his power. He obtained at last a li-
 berty of coinage, which he abused so much as to en-
 danger an insurrection among the poor people; for he
 issued a base coin, called *black money* by the common
 people, which they refused to take in payments. This
 favourite's skill in architecture had first introduced him
 to James; but he maintained his power by other arts:
 for, knowing that his master's predominant passion was
 the love of money, he procured it by the meanest and
 most oppressive methods. James, however, was inclined
 to have relieved his people by calling in Cochran's
 money; but he was diverted from that resolution,
 by considering that it would be agreeable to his old
 nobility. Besides Cochran, James had other favour-
 ites whose professions rendered them still less worthy
 of the royal countenance; James Hommil a taylor,
 Leonard a blacksmith, Torfisan a dancing-master, and
 some others. The favour shown to these men gave so
 much offence to the nobility, that, after some delibera-
 tion, they resolved to remove the king, with some of his
 least exceptionable domestics (but without offering any
 violence to his person) to the castle of Edinburgh; but
 to hang all his worthless favourites over Lawder-bridge,
 the common place of execution. Their deliberation
 was not kept so secret as not to come to the ears of the
 favourites; who suspecting the worst, awakened James
 before day-break, and informed him of the meeting.
 He ordered Cochran to repair to it, and to bring him
 an account of its proceedings (1). According to Lind-
 say,

(1) Lindsay's description of this upstart's magnificence is very particular, and may serve to give the reader
 an idea of the finery of that age. "Cochran (says he), the earl of Mar, came from the king to the council
 (which

Scotland. say, who seems to have had very minute information as to this event, Cochran rudely knocked at the door of the church, just after the assembly had finished their consultation; and upon Sir Robert Douglas of Lochleven (who was appointed to watch the door) informing them that the earl of Mar demanded admittance, the earl of Angus ordered the door to be thrown open; and rushing upon Cochran, he pulled a massy gold chain from his neck, saying, that a rope would become him better; while Sir Robert Douglas stripped him of a costly blowing horn he wore by his side, as was the manner of the times, telling him he had been too long the hunter of mischief. Cochran, with astonishment, asked them whether they were in jest or earnest; but they soon convinced him they were in earnest, by pinioning down his arms with a common halter till he should be carried to execution.

323 With others of the king's favourites. The earl of Angus, with some of the chief lords, attended by a detachment of troops, then repaired to the king's tent, where they seized his other favourites, Thomas Preston, Sir William Rogers, James Hommil, William Torfisan, and Leonard: and upbraided James himself, in very rude terms, with his misconduct in government, and even in private life, in not only being counselled by the above minions, but for keeping company with a lady who was called the *Daisy*. We know of no resistance made by James. He only interceded for the safety of a young gentleman, one John Ramsay of Balmain. Cochran, with his other worthless favourites, were hanged over Lawder-bridge before his eyes; and he himself was conducted, under an easy restraint, to the castle of Edinburgh.

324 James confined in the castle of Edinburgh. James, though confined, behaved with great spirit; and even refused to pardon those who had confined him, or who had any hand in the execution at Lawder. At last, however, he was relieved by the duke of Albany, who, at the queen's desire, undertook to deliver her husband from confinement. This he accomplished, as some say, by surprising the castle of Edinburgh; though, according to others, the gates were opened, upon a formal requisition made for that purpose by two heralds at arms. After he had obtained his liberty, the king repaired to the abbey of Holyroodhouse with his brother, who now acted as his first minister. All the lords who were near the capital came to pay him their compliments; but James was so much exasperated at what had happened, that he committed 16 of them prisoners to the castle of Edinburgh. After his release, James granted a patent to the citizens of Edinburgh, and enlarged their privileges.

325 Secret negotiations with Henry VII. of England. In 1487, James finished some secret negotiations in which he had engaged with Henry king of England some time. The principal articles agreed on between the two monarchs were, That king James's second son

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Scotland. should marry Catherine the third daughter of Edward IV. and sister to the princess Elizabeth, now queen of England; and that James himself, who was now a widower, should marry queen Elizabeth. A third marriage was also to be concluded between the duke of Rothelay and another daughter of Edward IV. That in order to these treaties, and for ending all controversies concerning the town of Berwick, which the king of Scotland desired so much to possess, a congress should be held the ensuing year.

326 A powerful confederacy was formed against the king; the origin of which was as follows. James was a great patron of architecture; and being pleased with the situation of Stirling castle, he resolved to give it all the embellishments which that art could bestow; and about this time he made it the chief place of his residence. He raised within it a hall, which at that time was deemed a noble structure; and a college, which he called the chapel-royal. This college was endowed with an archdean who was a bishop, a subdean, a treasurer, a chanter and subchanter, with a double set of other officers usually belonging to such institutions. The expences necessary for maintaining these were considerable, and the king had resolved to assign the revenues of the rich priory of Coldingham for that purpose. This priory had been generally held by one of the name of Hume; and that family, through length of time, considered it as their property: they therefore strongly opposed the king's intention. The dispute seems to have lasted some years: for the former parliament had passed a vote, annexing the priory to the king's chapel-royal; and the parliament of this year had passed a statute, strictly prohibiting all persons, spiritual and temporal, to attempt any thing, directly or indirectly, contrary or prejudicial to the said union and annexation. The Humes resented their being stripped of so gainful a revenue, the loss of which affected most of the gentlemen of that name; and they united themselves with the Hepburns, another powerful clan in that neighbourhood, under the lord Hales. An association was soon formed; by which both families engaged to stand by each other, and not to suffer any prior to be received for Coldingham, if he was not of one of their surnames. The lords Gray and Drummond soon joined the association; as did many other noblemen and gentlemen, who had their particular causes of discontent. Their agents gave out, that the king was grasping at arbitrary power; that he had acquired his popularity by deep hypocrisy; and that he was resolved to be signally revenged upon all who had any hand in the execution at Lawder. The earl of Angus, who was the soul of the confederacy, advised the conspirators to apply to the old earl of Douglas to head them: but that nobleman was now dead to all ambition, and instead

327 Owing to a quarrel with the family of Hume.

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(which council was holden in the kirk of Lawder for the time), who was well accompanied with a band of men of war, to the number of 300 light axes, all clad in white livery, and black bends thereon, that they might be known for Cochran the earl of Mar's men. Himself was clad in a riding-pie of black velvet, with a great chain of gold about his neck, to the value of 500 crowns; and four blowing horns, with both the ends of gold and silk, set with precious stones. His horn was tipped with fine gold at every end, and a precious stone, called a *beryl*, hanging in the midst. This Cochran had his heumont borne before him, overgilt with gold; so were all the rest of his horns; and all his pallions (pavilions or tents) were of fine canvas of silk, and the cords thereof fine twined silk; and the chains upon his pallions were double overgilt with gold."

Scotland.

328
Extinction
of one of
the branch-
es of the
family of
Douglas.

329
Pufflani-
mous beha-
viour of
James.

330
Is set at de-
fiance by
the conspi-
rators.

of encouraging the conspirators, he pathetically exhorted them to break off all their rebellious connections, and return to their duty; expressing the most sincere contrition for his own past conduct. Finding he could not prevail with them, he wrote to all the numerous friends and descendants of his family, and particularly to Douglas of Cavers, sheriff of Teviotdale, dissuading them from entering into the conspiracy; and some of his original letters to that effect are said to be still extant. That great man survived this application but a short time; for he died without issue at Lindores, on the 15th of April 1488; and in him ended the first branch of that noble and illustrious house. He was remarkable for being the most learned of all the Scots nobility, and for the comeliness of his person.

James appears to have been no stranger to the proceedings of the conspirators: but though he dreaded them, he depended upon the protection of the law, as they did upon his pusillanimity. His degeneracy in this respect is remarkable. Descended from a race of heroes, he was the first of his family who had been branded with cowardice. But his conduct at this time fully justifies the charge. Instead of vigorously supporting the execution of the laws in his own person, he shut himself up in his beloved castle of Stirling, and raised a body guard; the command of which he gave to the lord Bothwel, master of his household. He likewise issued a proclamation, forbidding any person in arms to approach the court; and Bothwel had a warrant to see the same put into execution. Though the king's proceedings in all this were perfectly agreeable to law, yet they were given out by his enemies as so many indications of his aversion to the nobility, and served only to induce them to parade, armed, about the country in more numerous bodies.

The connections entered into by James with Henry alarmed the conspirators, and made them resolve to strike the great blow before James could avail himself of an alliance that seemed to place him above all opposition either abroad or at home. The acquisition of Berwick to the crown of Scotland, which was looked upon to be as good as concluded; the marriage of the duke of Rothesay with the daughter of the dowager and sister to the consort queen of England; and, above all, the strict harmony which reigned between James and the states of his kingdom, rendered the conspirators in a manner desperate. Besides the earl of Angus, the earls of Argyle and Lenox favoured the conspirators; for when the whole of James's convention with England is considered, and compared with after-events, nothing can be more plain, than that the success of the conspirators was owing to his English connections; and that they made use of them to affirm, that Scotland was soon to become a province of England, and that James intended to govern his subjects by an English force.—Those specious allegations did the conspirators great service, and inclined many, even of the moderate party, to their cause. They soon took the field, appointed their rendezvous, and all the south of Scotland was in arms. James continued to rely upon the authority of his parliament; and summoned, in the terms of law, the insurgents to answer at the proper tribunals for their repeated breaches of the peace. The conspirators, far from paying any regard to his citations, tore them in pieces, buffeted and otherwise maltreated the messen-

gers, and set the laws of their country at open defiance. Scotland. Even north of the Forth, the heads of the houses of Gray and Drummond spread the spirit of disaffection through the populous counties of Fife and Angus; but the counties north of the Grampians continued firm in their duty.

The duke of Rothesay was then a promising youth about fifteen years of age; and the subjecting the kingdom of Scotland to that of England being the chief, if not the only cause urged by the rebels for their appearing in arms, they naturally threw their eyes upon that prince, as his appearance at their head would give strength and vigour to their cause; and in this they were not deceived. James, in the mean time, finding the inhabitants of the southern provinces were either engaged in the rebellion, or at best observed a cold neutrality, embarked on board of a vessel which was then lying in the frith of Forth, and passed to the north of that river, not finding it safe to go by land to Stirling. Arriving at the castle, he gave orders that the duke of Rothesay (as foreseeing what afterwards happened) should be put under the care of one Schaw of Sauchie, whom he had made its governor, charging him not to suffer the prince upon any account to depart out of the fort. The rebels giving out that James had fled to Flanders plundered his equipages and baggage before they passed the Forth; and they there found a large sum of money, which proved to be of the utmost consequence to their affairs. They then surprised the castle of Dunbar, and plundered the houses of every man to the south of the Forth whom they suspected to be a royalist.

James was all this time making a progress, and holding courts of justice, in the north, where the great families were entirely devoted to his service, particularly the earls of Huntley, Errol, and Marshal.—Every day brought him fresh alarms from the south, which left him no farther room either for delay or deliberation. The conspirators, notwithstanding the promising appearance of their affairs, found, that in a short time their cause must languish, and their numbers dwindle, unless they were furnished with fresh pretexts, and headed by a person of the greatest authority. While they were deliberating who that person should be, the earl of Angus boldly proposed the duke of Rothesay; and an immediate application was made to Schaw, the young prince's governor, who secretly favoured their cause, and was prevailed upon by a considerable sum of money to put the prince into their hands, and to declare for the rebels.

James having ordered all the force in the north to assemble, hurried to Perth (then called St John's town), where he appointed the rendezvous of his army, which amounted to 30,000 men. Among the other noblemen who attended him was the famous lord David Lindsay of the Byres (an officer of great courage and experience, having long served in foreign countries), who headed 3000 foot and 1000 horse, mostly raised in Fifeshire. Upon his approaching the king's person, he presented him with a horse of remarkable spirit and beauty, and informed his majesty, that he might trust his life to his agility and sure-footedness. The lord Ruthven, who was sheriff of Strathern, and ancestor (if we mistake not) to the unfortunate earls of Gowry, joined James at the head of 3000 well armed men.—

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331
The duke
of Rothesay
put into
confinement.

332
Success of
the rebels.

333
They are
headed by
the duke of
Rothesay.

Scotland. The whole army being assembled, James proceeded to Stirling; but he was astonished, when he was not only denied entrance into the castle, but saw the guns pointed against his person, and understood, for the first time, that his son was at the head of the rebels. Schaw pretended that the duke of Rothesay had been carried off against his will; but the king's answer was, "Fye, traitor, thou hast deceived me; and if I live I shall be revenged on thee, and thou shalt be rewarded as thou hast served." James lay that night in the town of Stirling, where he was joined by all his army; and understanding that the rebels were advancing, he formed his line of battle. The earl of Athol his uncle, who was trusted by both parties, proposed an accommodation; which was accordingly effected, if we are to believe Abercromby and other historians; but we know not the terms, for none are mentioned on either side.— James is said to have failed on his part; but had there been any grounds for such a charge against him, there can scarcely be a doubt but that the rebels would have published them. That a treaty was entered into is past dispute; and the earl of Athol surrendered himself as a hostage into the hands of the rebels.

James was sensible of the advantage which public clamour gave to his enemies; and he applied to the kings of France and England, and the pope, for their interposition. His holiness named Adrian de Castello for his nuncio on that occasion; and the two kings threatened to raise troops for the service of James.— He, by a fatality not uncommon to weak princes, left the strong castle of Edinburgh, where he might have been in safety till his friends, who had dispersed themselves upon the faith of the late negociation, could be reassembled; and crossing the Forth, he made another attempt to be admitted into the castle of Stirling; but was disappointed; and informed that the rebels were at Torwood in the neighbourhood, and ready to give him battle. He was in possession of the castle of Blackness; his admiral, Wood, commanded the Forth; and his loyal subjects in the north were upon their march to join him. Hawthornden says, that the rebels had made a show of dismissing their troops, that they might draw James into the field; and that while he remained at Blackness, he was attended by the earls of Montrose, Glencairn, and the lords Maxwell and Ruthven. To give his northern troops time to join him, he proposed a negociation; but that was soon at an end, upon the rebels peremptorily requiring him to resign his crown to his son, that is, to themselves.

The rebels had been inured to war. They consisted chiefly of borderers, well armed and disciplined; in which they had the advantage of the king's Lowland subjects, who had not been accustomed to arms. What the numbers on both sides were does not clearly appear; but it is probable that the forces of James were superior to the rebels. They were then at Falkirk; but they soon passed the Carron, encamped above the bridge near Torwood, and made such dispositions as rendered a battle unavoidable, unless James would have dispersed his army, and gone on board Wood's ships: but he did not know himself, and resolved on a battle. He was encamped at a small brook named Sauchie-burn, near the same spot of ground where the great Bruce had defeated the English under Edward the second. The earl of Menteith, the lords

Erskine, Graham, Ruthven, and Maxwell, commanded the first line of the king's army. The second was commanded by the earl of Glencairn, who was at the head of the Westland and Highland men. The earl of Crawford, with the lord Boyd and Lindsay of Byres, commanded the rear, wherein the king's main strength consisted, and where he himself appeared in person, completely armed, and mounted upon the fine horse which had been presented to him by Lindsay.

The first line of the royalists obliged that of the rebels to give way; but the latter being supported by the Annandale men and borderers, the first and second line of the king's army were beat back to the third.

The little courage James possessed had forsaken him at the first onset; and he had put spurs to his horse, intending to gain the banks of the Forth, and to go on board one of Wood's ships. In passing through the village of Bannockburn, a woman who was filling her pitcher at the brook, frightened at the sight of a man in armour galloping full speed, left it behind her; and the horse taking fright, the king was thrown to the ground, and carried, bruised and maimed, by a miller and his wife, into their hovel. He immediately called for a priest to make his confession; and the rustics demanding his name and rank, "I was (said he incautiously) your king this morning." The woman, overcome with astonishment, clapped her hands, and running to the door called for a priest to confess the king. "I am a priest (said one passing by), lead me to his majesty." Being introduced into the hovel, he saw the king covered with a coarse cloth; and kneeling by him, he asked James whether he thought he could recover, if properly attended by physicians? James answering in the affirmative, the villain pulled out a dagger, and stabbed him to the heart. Such is the dark account we are able to give of this prince's unhappy end. The name of the person who murdered him is said to have been Sir Andrew Borthwick, a priest, one of the pope's knights. Some pretend that the lord Gray, and others that Robert Stirling of Keir, was the regicide; and even Buchanan (the tenor of whose history is a justification of this murder), is uncertain as to the name of the person who gave him the fatal blow.

It is probable that the royalists lost the battle thro' the cowardice of James. Even after his flight his troops fought bravely; but they were damped on receiving the certain accounts of his death. The prince, young as he was, had an idea of the unnatural part he was acting, and before the battle he had given a strict charge for the safety of his father's person. Upon hearing that he had retired from the field, he sent orders that none should pursue him; but they were ineffectual, the rebels being sensible that they could have no safety but in the king's death. When that was certified, hostilities seemed to cease; nor were the royalists pursued. The number of slain on both sides is uncertain; but it must have been considerable, as the earl of Glencairn, the lords Sempil, Erskine, and Ruthven, and other gentlemen of great eminence, are mentioned. As to the duke of Rothesay, who was now king, he appeared inconsolable when he heard of his father's death; but the rebels endeavoured to efface his grief, by the profusion of honours they paid him when he was recognized as king.

The remorse and anguish of the young king, on reflecting

Scotland.

334
James af-
fembles his
army.

337
Abandons
his army,
and flies.

338
Is thrown
from his
horse, and
murdered.

335
Is required
by the re-
bels to re-
sign his
crown.

336
Comes to a
battle with
them.

339
Grief of his
son for his
death.

Scotland.

reflecting upon the unnatural part he had acted, was inexpressible; and the noblemen who had been engaged in the rebellion became apprehensive for their own safety. The catastrophe of the unfortunate James III. however, was not yet become public; and it was thought by many that he had gone aboard some of the ships belonging to the Scottish admiral Sir Andrew Wood. James, willing to indulge hope as long as it was possible, desired an interview with the admiral; but the latter refused to come on shore, unless he had sufficient hostages for his safety. These being delivered, Sir Andrew waited upon the king at Leith. He had again and again, by messages, assured him that he knew nothing of the late king; and he had even offered to allow his ships to be searched: yet such was the anxiety of the new king, that he could not be satisfied till he had examined him in person. Young James had been long a stranger to his father, so that he could not have distinguished him easily from others. When Wood, therefore, entered the room, being struck with his noble appearance, he asked him, "Are you my father?" "I am not," replied Wood, bursting into tears; "but I was your father's true servant, and while I live I shall be the determined enemy of his murderers." This did not satisfy the lords, who demanded whether he knew where the king was. The admiral replied, that he knew not; and upon their questioning him concerning his manœuvres on the day of battle, when his boats were seen plying backwards and forwards, he told them, that he and his brother had determined to assist the king in person; but all they could do was to save some of the royalists in their ships. "I would to God, (says he), my king was there safely, for I would defend and keep him skaitheless from all the traitors who have cruelly murdered him: for I think to see the day to behold them hanged and drawn for their demerits." This spirited declaration, and the freedom with which it was delivered, struck the guilty part of the council with dismay; but the fear of sacrificing the hostages procured Wood his freedom, and he was suffered to depart to his ships. When he came on board, he found his brother preparing to hang the two lords who had been left as hostages; which would certainly have been their fate, had the admiral been longer detained.

Wood had scarcely reached his ships, when the lords, calling the inhabitants of Leith together, offered them a large premium if they would fit out a sufficient force to destroy that bold pirate and his crew, as they called Wood; but the townsmen, who, it seems, did not much care for the service, replied, that Wood's ships were a match for any ten ships that could be fitted out in Scotland. The council then removed to Edinburgh, where James IV. was crowned on the 24th of June 1487.

341
The regicides assemble a parliament.

In the month of October this year, the nobility and others who had been present at the king's coronation, converted themselves into a parliament, and passed an act by which they were indemnified for their rebellion against their late sovereign; after which, they ordered the act to be exemplified under the great seal of Scotland, that it might be producible in their justification if called for by any foreign prince. They next proceeded to the arduous task of vindicating their rebellion in the eyes of the public; and so far did they gain upon the king by the force of flattery, that he consented to sum-

mon the lords who had taken part with his father, before the parliament, to answer for their conduct. In consequence of this, no fewer than 28 lords were cited to appear at Edinburgh in the space of 40 days. The first upon the list was the lord David Lindsay, whose form of arraignment was as follows. "Lord David Lindsay of the Byres, answer for the cruel coming against the king at Bannockburn with his father, giving him counsel to have devoured the king's grace here present; and, to that effect, gave him a sword and a good horse, to fortify him against his son. Your answer hereto." Lord Lindsay was remarkable for the bluntness of his conversation and the freedom of his sentiments; and being irritated by this charge, he delivered himself in such a manner concerning the treason of the rebellious lords, as abashed the boldest of his accusers. As they were unable to answer him, all they could do was to press him to throw himself upon the king's clemency; which he refused, as being guilty of no crime. His brother, Patrick Lindsay, undertook to be his advocate, and apologized upon his knees for the roughness of his behaviour, and at last observed an informality in the proceedings of the court; in consequence of which Lindsay was released, upon entering into recognizance to appear again at an appointed day: however, he was afterwards sent prisoner by the king's order, for a whole twelvemonth, to the castle of Rothesay in the Isle of Bute.

The regicides now endeavoured to gain the public favour by affecting a strict administration of justice. The king was advised to make a progress round the kingdom, attended by his council and judges; while, in the mean time, certain noblemen and gentlemen were appointed to exercise justice, and to suppress all kinds of disorders in their own lands and in those adjoining to them, till the king came to the age of 21. The memory of the late king was branded in the most opprobrious manner. All justices, sheriffs, and stewards, who were possessed of heritable offices, but who had taken up arms for the late king, were either deprived of them for three years, or rendered incapable of enjoying them for ever after. All the young nobility who had been disinherited by their fathers for taking arms against the late king, were, by act of parliament, restored to their several successions in the most ample manner. At last, in order to give a kind of proof to the world that they intended only to resettle the state of the nation, without prejudice to the lower ranks of subjects, who did no more than follow the examples of their superiors, it was enacted, "That all goods and effects taken from burgesses, merchants, and those who had only personal estates, or, as they are called, *unlanded men*, since the battle of Stirling, were not only to be restored, but the owners were to be indemnified for their losses; and their persons, if in custody, were to be set at liberty. Churchmen, who were taken in arms, were to be delivered over to their ordinances, to be dealt with by them according to the law." The castle of Dunbar was ordered to be demolished; and some statutes were enacted in favour of commerce, and for the exclusion of foreigners.

These last acts were passed with a view to recompence the boroughs, who had been very active in their opposition to the late king. However, the lords, before they dissolved their parliament, thought it necessary

Scotland. ³⁴⁵ *Act relative to the king's marriage.* ry to give some public testimony of their disapproving the late king's connection with England. It was therefore enacted, "That as the king was now of an age to marry a noble princess, *born and descended of a noble and worshipful house*, an honourable embassy should be sent to the realms of France, Brittany, Spain, and other places, in order to conclude the matter." This embassy was to be very splendid. It was to consist of a bishop, an earl, or lord of parliament, a secretary, who was generally a clergyman, and a knight. They were to be attended by 50 horsemen; 5000*l.* was to be allowed them for the discharge of their embassy, and they were empowered to renew the ancient league between France and Scotland; and, in the mean time, a herald, or, as he was called, a *trusty squire*, was sent abroad to visit the several courts of Europe, in order to find out a proper match for the king. One considerable obstacle, however, lay in the way of this embassy. ³⁴⁶ *They are opposed by the Pope.* The pope had laid under an interdict all those who had appeared in arms against the late king; and the party who now governed Scotland were looked upon by all the powers of Europe as rebels and murderers. The embassy was therefore suspended for a considerable time; for it was not till the year 1491 that the pope could be prevailed upon to take off the interdict, upon the most humble submissions and professions of repentance made by the guilty parties.

In the mean time, the many good qualities which discovered themselves in the young king began to conciliate the affections of his people to him. Being considered, however, as little better than a prisoner in the hands of his father's murderers, several of the nobility made use of that as a pretence for taking arms. The most forward of these was the earl of Lenox, who with 2000 men attempted to surprise the town of Stirling; but, being betrayed by one of his own men, he was defeated, taken unawares, and the castle of Dumbarton, of which he was the keeper, taken by the opposite party. In the north, the earls of Huntley and Marshal, with the Lord Forbes, complained that they had been deceived, and declared their resolution to revenge the late king's death. Lord Forbes having procured the bloody shirt of the murdered prince, displayed it on the point of a lance, as a banner under which all loyal subjects should lift themselves. However, after the defeat of Lenox, the northern chieftains found themselves incapable of marching southwards, and were therefore obliged to abandon their enterprise. ³⁴⁷ *Attempts to revenge the death James III.* The cause of the murdered king was next undertaken by Henry VII. of England, who made an offer to Sir Andrew Wood of five ships to revenge it. The admiral accepted the proposal; but the English behaving as pirates, and plundering indiscriminately all who came in their way, he thought proper to separate himself from them, yet without offering to attack or oppose them. ³⁴⁸ *Henry VII. sends five ships for this purpose.* Upon this, James was advised to send for the admiral, to offer him a pardon, and a commission to act against the English freebooters. Wood accepted of the king's offer; and being well provided with ammunition and artillery, he, with two ships only, attacked the five English vessels, all of which he took, and brought their crews prisoners to Leith, for which he was nobly rewarded by his majesty. ³⁴⁹ *Who act piratically, and are all taken by Sir Andrew Wood.*

This conduct of Wood was highly resented by the king of England, who immediately vowed revenge.

The Scottish admiral's ships had been fitted out for Scotland. commerce as well as war, and Henry commanded his best sea-officer, Sir Stephen Bull, to intercept him on his return from Flanders, whither he had gone upon a commercial voyage. Wood had no more than two ships with him: the English admiral had three; and those much larger, and carrying a greater weight of metal, than the Scottish vessels. The English took their station at the island of May, in the mouth of the Frith of Forth, and, having come unawares upon their enemies, fired two guns as a signal for their surrendering themselves. The Scottish commander encouraged his men as well as he could; and finding them determined to stand by him to the last, began the engagement in sight of numberless spectators who appeared on both sides of the frith. The fight continued all that day, and was renewed with redoubled fury in the morning; but, in the mean time, the ebb-tide and a south wind had carried both squadrons to the mouth of the Tay. Here the English fought under great disadvantages, by reason of the sand-banks; and before they could get clear of them, all the three were obliged to submit to the Scots, who carried them to Dundee. Wood treated his prisoners with great humanity; and having afterwards presented them to King James, the latter dismissed them not only without ransom, but with presents to the officers and crews, and a letter to King Henry. To this Henry returned a polite answer, a truce was concluded, and all differences for the present were accommodated. ³⁵⁰ *But is taken with all his ships.*

James all this time had continued to display such moderation in his government, and appeared to have the advantage of his subjects so much at heart, that they became gradually well-affected to his government, and in 1490 all parties were fully reconciled. We may from thence date the commencement of the reign of James IV.; and the next year the happiness of his kingdom was completed, by taking off the pope's interdict, and giving the king absolution for the hand he had in his father's death.

Tranquillity being thus restored, the negotiations concerning the king's marriage began to take place, but met with several interruptions. In 1493, Henry VII. proposed a match between the king of Scotland and his cousin the princess Catharine. James was too much attached to France to be fond of English connections, and probably thought this match below his dignity; in consequence of which the proposal was treated with contempt. However, notwithstanding this ill success, Henry made another offer of alliance with James; and, in 1495, proposed a marriage betwixt him and his eldest daughter Margaret. This proposal was accepted: but the match seems not to have been at all agreeable to James; for, at the very time in which he was negotiating the marriage, he not only protected Perkin Warbeck, the avowed enemy and pretender to the crown of Henry, but invaded England on his account. This conduct was highly resented by the English parliament; but Henry himself forgave even this gross insult, and the marriage negotiations were once more resumed. The bride was no more than ten years and six months old; and being only the fourth degree of blood from James, it was necessary to procure a dispensation from the pope. This being obtained, a treaty of perpetual peace was concluded between the two nations, ³⁵¹ *Marriage-treaty with England.*

Scotland. nations, on the 1st of July 1503, being the first that had taken place for 170 years, since the peace of Northampton, concluded between Robert I. and Edward III.

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A perpetual
peace with
that nation

354
Magnifi-
cence of
the royal
nuptials.

One of the great ends which Henry had in view in promoting this marriage, was to detach James from the French interest: no sooner, therefore, was the treaty signed, than he wrote to his son-in-law to this purpose; who, however, politely declined to break with his ancient ally. On the 16th of June, the royal bride set out from Richmond in Surry, in company with her father, who gave her the convoy as far as Collewston, the residence of his mother the countess of Richmond. After passing some days there, the king resigned his daughter to the care of the earls of Surry and Northumberland, who proceeded with her to the borders of Scotland. Here a number of the company were permitted to take their leave; but those who remained still made a royal appearance. At Lamberton-church they were met by James, attended by a numerous train of his nobility and officers of state. From Lamberton they proceeded to Dalkeith, and next day to Edinburgh; where the nuptials were celebrated with the greatest splendor. On this occasion, it is said that the Scots surpassed all their guests in extravagance and luxury: which must have been owing to the great intercourse and commerce which James and his subjects maintained with foreign courts and countries.

355
James be-
comes a
powerful
monarch.

After the celebration of the nuptials, James appears to have enjoyed a tranquillity unknown almost to any of his predecessors; and began to make a considerable figure among the European potentates. But the magnificence of his court and embassies, his liberality to strangers and to learned men, his costly edifices, and, above all, the large sums he laid out in ship-building, had now brought him into some difficulties; and he so far attended to the advice and example of his father-in-law, that he supplied his necessities by reviving dormant penal laws, particularly with regard to wardships and old titles of estates, by which he raised large sums. Though he did this without assembling his parliament,

yet he found agents who justified those proceedings, in the same manner as Epsom and Dudley did those of Henry, under the sanction of law. At last, however, touched with the sufferings of his subjects, he ordered all prosecutions to be stopped. He even went farther: for, sensible of the detestation into which his father-in-law's avarice had brought himself and his administration, he ordered the ministers who had advised him to those shameful courses to be imprisoned; and some of them, who probably had exceeded their commission, actually died in their confinement.

About this time, James applied himself, with incredible assiduity, to the building of ships; one of which, the *St Michael*, is supposed to have been the largest then in the world (M). He worked with his own hands in building it; and it is plain, from his conduct, that he was aspiring to be a maritime power, in which he was encouraged by the excellent seamen which Scotland then produced. The first essay of his arms by sea was in favour of his kinsman John king of Denmark. This prince was brother to Margaret queen of Scotland; and had partly been called to the throne of Sweden, and partly possessed it by force. He was opposed by the administrator, Sture, whom he pardoned after he was crowned. Sture, however, renewing his rebellion, and the Norwegians revolting at the same time, John found himself under such difficulties, that he was forced to return to Denmark; but he left his queen in possession of the castle of Stockholm, which she bravely defended against Sture and the Swedes. This heroic princess became a great favourite with James; and several letters that passed between them are still extant. The king of Denmark, next to the French monarch, was the favourite ally of James; who, early in his reign, had compromised some differences between them. It likewise appears, from the histories of the north, that both James and his father had given great assistance to his Danish majesty in reducing the Norwegians; and he resolved to become a party in the war against the Swedes, and the Lubeckers who assisted them, if the former

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Applies
himself to
maritime
affairs.

(M) Of this ship we have the following account by Lindsay of Pitscottie. "In the same year, the king of Scotland bigged a great ship, called the *Great Michael*, which was the greatest ship, and of most strength, that ever sailed in England or France. For this ship was of so great stature, and took so much timber, that, except Falkland, she wasted all the woods in Fife, which was oak-wood, by all timber that was gotten out of Norway; for she was so strong, and of so great length and breadth (all the wrights of Scotland, yea, and many other strangers, were at her device, by the king's commandment, who wrought very busily in her: but it was a year and day ere she was complete); to wit, she was twelve score foot of length, and thirty-six foot within the sides. She was ten foot thick in the wall, outted jests of oak in her wall, and boards on every side, so stark and so thick, that no cannon could go through her. This great ship cumbered Scotland to get her to the sea. From that time that she was afloat, and her masts and sails complete, with tows and anchors effeiring thereto, she was counted to the king to be thirty thousand pounds of expences, by her artillery, which was very great and costly to the king, by all the rest of her orders; to wit, she bare many cannons, six on every side, with three great bassils, two behind in her dock, and one before, with three hundred shot of small artillery, that is to say, myand and battret-falcon, and quarter-falcon, slings, pestilent serpetens, and double-dogs, with hagtor and culvering, cors-bows and hand-bows. She had three hundred mariners to sail her; she had six score of gunners to use her artillery; and had a thousand men of war, by her captain, ship-pers, and quarter-masters.

"When this ship past to the sea, and was lying in the road, the king gart shoot a cannon at her, to essay her if she was wight; but I heard say, it deared her not, and did her little skaith. And if any man believe that this description of the ship be not of verity, as we have written, let him pass to the gate of Tillibardin, and there, afore the same, ye will see the length and breadth of her, planted with hawthorn, by the wright that helped to make her. As for other properties of her, Sir Andrew Wood is my author, who was quarter-master of her; and Robert Bartyne, who was master-shipper."

Scotland. former continued in their revolt. Previous to this, he sent an ambassador to offer his mediation between John and his subjects. The mediation was accordingly accepted of, and the negotiations were opened at Calmar. The deputies of Sweden not attending, John prevailed with those of Denmark and Norway to pronounce sentence of forfeiture against Sture and all his adherents. In the mean time, the siege of the castle of Stockholm was so warmly pressed, that the garrison was diminished to a handful, and those destitute of all kind of provisions; so that the brave queen was forced to capitulate, and to surrender up the fortrefs, on condition that she would be suffered to depart for Denmark; but the capitulation was perfidiously broken by Sture, and she was confined in a monastery.

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James assists Denmark against Sweden.

It was on this occasion that James resolved to employ his maritime power. He wrote a letter, conceived in the strongest terms, to the archbishop of Upsal, the primate of Sweden, exhorting him to employ all his authority in favour of the king; and another letter to the Lubeckers, threatening to declare war against them, as well as the Swedes, if they jointly continued to assist the rebels. According to Hollinshed, James, in consequence of king John's application, gave the command of an army of 10,000 men to the earl of Arran, who replaced John upon his throne. Though this does not strictly appear to be truth, yet it is certain, that, had it not been for James, John must have sunk under the weight of his enemies. Sture, whose arms had made great progress, hearing that a considerable armament was fitting out in Scotland, and knowing that James had prevailed with the French king to assist John likewise, agreed to release the queen, and to conduct her to the frontiers of Denmark; where he died. By this time, James's armament, which was commanded by the earl of Arran, had set sail; but perceiving that all matters were adjusted between John and the Swedes, the ships returned sooner than James expected, "which (says he, in a very polite letter he wrote to the queen upon the occasion) they durst not have done, had they not brought me an account that her Danish majesty was in perfect health and safety." The severity of John having occasioned a fresh revolt, James again sent a squadron to his assistance, which appeared before Stockholm, and obliged the Lubeckers to conclude a new treaty.

358
Chastises the Flemings and Hollanders.

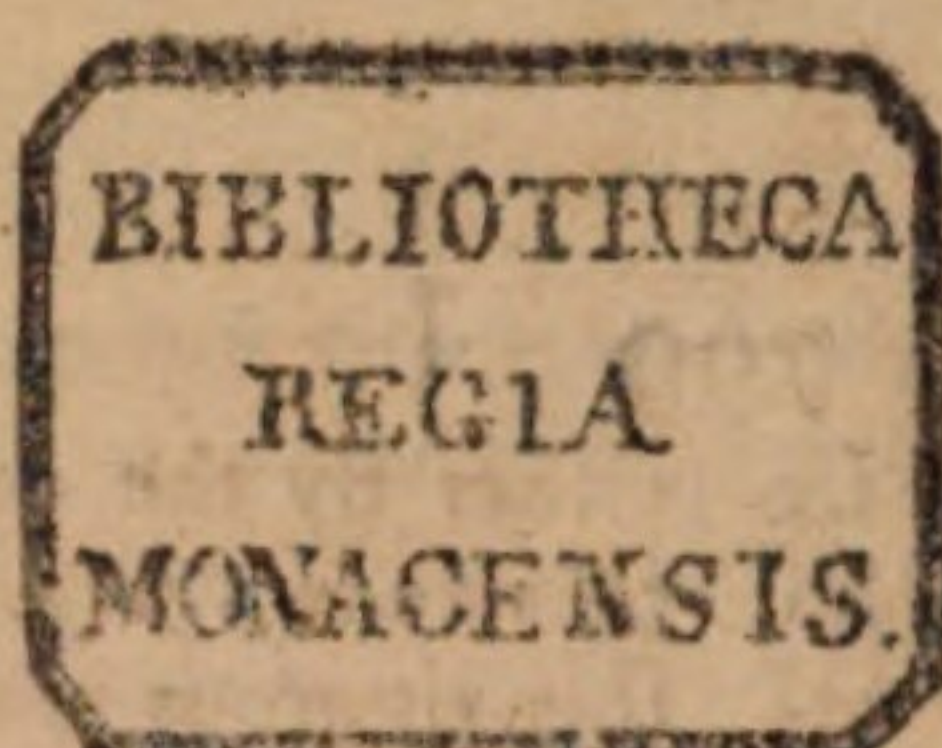
James, having thus honourably discharged his engagements with his uncle the king of Denmark, turned his attention towards the Flemings and Hollanders, who had insulted his flag, on account of the assistance he had afforded the duke of Gueldres, as well as from motives of rapaciousness, which distinguished those traders, who are said not only to have plundered the Scots ships, but to have thrown their crews overboard to conceal their villany. James gave the command of a squadron to Barton; who put to sea, and, without any ceremony, treated all the Dutch and Flemish traders who fell into his hands as pirates, and sent their heads in hogsheds to James. Soon after, Barton returned to Scotland, and brought with him a number of rich prizes, which rendered his reputation as a seaman famous all over Europe.—James was then so much respected upon the continent, that we know of no resentment shown

either by the court of Spain, whose subjects those Netherlands were, or of any other power in Europe, for this vigorous proceeding.

The peace with England continued all the time of Henry VII. nor did his son Henry VIII. though he had not the same reason as his father to keep well with the Scots, for some time shew any disposition to break with them. A breach, however, did very soon take place, which was never afterwards thoroughly made up.

About 30 years before, one John Barton (a relation, probably, to the famous Barton) commanded a trading vessel, which was taken by two Portuguese sea-captains in the port of Sluys; and the captain, with several Scotchmen, were killed in endeavouring to defend their property. The action was esteemed cowardly as well as piratical, because it was done under the protection of a large Portuguese squadron. The ship and the remaining part of the crew, with the cargo, were carried to Portugal, from whence no redress could be obtained; and James III. granted letters of marque to John and Robert Bartons, heirs to the Barton who had been murdered. Upon the accession of James IV. to the crown of Scotland, the letters of marque were recalled, and a friendly correspondence was entered into between James and his Portuguese majesty. No redress, however, was to be had from the latter; and Robert Barton being made a prisoner, and his ship a prize, he was detained in Zealand, till James procured his deliverance, by applying in his favour to the emperor Maximilian. Sir Andrew Barton took part in the quarrel; and having obtained a like letter of marque, he made dreadful depredations on the Portuguese trade, and, according to English authors, he plundered many English ships, on pretence of their carrying Portuguese property, and made the navigation of the narrow seas dangerous to Englishmen. The court of London received daily complaints of Barton's depredations; but Henry being at this time very averse to quarrel with James, these complaints were heard with great coldness at his council-board. The earl of Surry had then two sons, gallant noblemen; and he declared to Henry's face, that while he had an estate that could furnish out a ship, or a son who was capable of commanding one, the narrow seas should not be infested. Henry could not discourage this generous offer; and letters of marque were accordingly granted to the two young noblemen, Sir Thomas and Sir Edward Howard. The prizes that Barton had taken had rendered his ships immensely rich, consequently they were heavy laden, and unfit for fighting; while we may easily suppose, that the ships of the Howards were clean, and of a superior force in every respect to those of Barton. After encountering a great deal of foul weather, Sir Thomas Howard came up with the Lyon, which was commanded by Sir Andrew Barton in person; and Sir Edward fell in with the Unicorn, Barton's other ship. The event was such as might be expected from the inequality of the match. Sir Andrew Barton was killed, while he was animating, with his whistle, his men to hold out to the last; and both the Scotch ships being taken, were carried in triumph to London, with their crews prisoners.

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Cause of quarrel with England.



E R R A T A.

- Page 60. col. 1. line 30. For *retraherent*, read *retraflarent*.
62. — 1. *dele*, at the end of line 14 from the bottom.
64. — 1. line 9. For *bat*, read *pot*.
302. — 2. — 18. For *Mouffes*, read *Maiffons*.
463. — 2. — 3. from the bottom. For *excite*, read *execute*.
465. — 2. — 4. from the bottom. For $\phi f \times \frac{CD}{CA}$ read $\phi = f \times \frac{CD}{CA}$.
466. — 1. — 45. For *meet*, read *ad*.
470. — 2. — 32. For *constrution*, read *consideration*.
473. — 1. — 45. For *fineness*, read *firmness*.
476. — 2. — 7. For *on*, read *or*.
479. — 1. — 2. from bottom. For *Bles*, read *Bled*.
482. — 1. — 29. For *Teloa*, read *Tilia*.
Do. do. — 53. For *hatchet*, read *hatchel*.
484. — 1. — 8. For *hatchet*, read *hatchel*.
486. — 1. — 16. For *cut*, read *cast*.
— — — 47. For *ling then*, read *lengthen*.
505. — 1. — 1. For *proportions*, read *propositions*.
506. — 2. — 12. For $\int \frac{A.CA}{CP}$ read $\int \frac{A.CA^2}{CP}$.
508. — 2. — 11. from the bottom. For *drain*, read *drum*.
509. — 1. — 20. For $\pm$, read $=$.
— — 2. — 17. For *production*, read *pendulum*.
518. — 2. — 33. For *impreffion*, read *impulfion*.
519. — 2. — 57. After A, *dele Therefore m is which we have*.
523. — 2. — 30. For *though*, read *then*.

N. B. In the article ROTATION, the small Italic *f*, which has been inadvertently used instead of the large $\int$, marks a fluent, or the sum of fluxionary quantities.

DIRECTIONS FOR PLACING THE PLATES OF VOL. XVI.

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